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THE WESTERN JOURNAL,

OF

AGRICULTURE, MANUFACTURES, SCIENCE, ARTS, INTERNAL IMPROVEMENT, COMMERCE,

AND

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Agriculture and the Mechanic Arts are the Arts of Civilization.

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EDITORS AND PROPRIETORS

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ART.—I.—PACIFIC RAILWAY—THE BOSTON PROJECT.

The remarks contained in the August number of the Western Journal, in reference to the Boston project of a railway from St. Louis to San Francisco, have called forth a communication from a committee of citizens of that city in defence of their scheme: the respectability of the source whence this project orignated entitles it to consideration, and we cheerfully comply with the desire of the committee in giving their address a place in our journal, but in doing this we must be allowed to discuss such points, as in our judgment appear objectionable.

It cannot be expected that any one scheme can be devised that will meet the entire approbation of all who are friendly to the principal measure; and hence a free discussion of objectionable points may be regarded as necessary to produce unity of sentiment, and concert of action. The following address containing the plan referred to, was submitted to a public meeting of the citizens of Boston by P. P. F. Degrand, Esq., in April last, and was unanimously adopted.

RAIL ROAD FROM ST. LOUIS TO SAN FRANCISCO.

TO THE PEOPLE OF THF UNITED STATES.

FELLOW CITIZENS:

"*I propose that a company* (COMPOSED OF MEN, IN WHOSE INTEGRITY AND STEADINESS OF PURPOSE, CONFIDENCE CAN BE REPOSED, BY THE NATION,) be chartered by Congress, to construct a Rail Road from St. Louis to San Francisco, with a capital of 100 Millions of dollars, and that this company, (after having paid in $2,000,000,) shall have the right to borrow United States 6 per cent. Stock, to such an amount, (not exceeding $98,000,000,) as may be sufficient to finish the Road and carry it into full operation, with a double track.

I propose that Congress give to this Company, a strip of the Public Lands, 10 miles wide, on the North side of the Road, and the Land for the bed of the Road, and for Depots, and the right to take, from the Public Lands, Wood, Gravel, Stone, Iron, and other materials, necessary to construct the Road.

THE ADOPTION OF THIS PLAN WILL SECURE THE COMPLETION OF THE ROAD, IN AS BRIEF A SPACE OF TIME, AS MAY BE PERMITTED, BY ITS PHYSICAL OBSTACLES:—AND WILL SECURE THIS BY A SINGLE ACT OF CONGRESS, free from the chance of future freaks of Legislation. THIS IS THE DISTINGUISHING FEATURE OF MY PLAN,—*and it is free from the objection of absorbing the private resources of active men;—and free from the risk of halting, in this great work, at every step, for want of tangible means.*

I propose that, immediately after the Surveys are made, the Company proceed *to construct this Rail Road on the whole Route*, going to work, at once, on as many different parts as practicable and building at difficult points, *temporary Rail Roads*, to be used while the permanent Rail Road is constructing:—and actually *bringing into use* the various portions of the Road, *as fast as completed.*

The Company being thus in possession of tangible means, and acting under a sense of the imperative necessity of giving to the public the facilities of Rail Road travelling, as fast as practicable, will very soon reduce to a moderate distance, the inconveniences of a Land Journey to California, and will secure the completion of the entire line, in the briefest period practicable:—and in the interim, the Mail-Stage and the traveller, by the Land-Route, by following, as near as convenient, the Track marked out for the Rail Road, will avail themselves more and more, every day, of the comfort and protection, naturally incident to the incipient stages of civilization, which accumulate on the line of a Rail Road, from the very moment it is begun, to the day of its completion.

I propose that, while the Road is constructing, A LINE OF TELEGRAPH BE ESTABLISHED, as far and as fast as practicable, to transmit intelligence for the purposes of the Road, and for the Government, and for the public generally.

I propose that no stimulus, stronger than Cold Water, be allowed to be used, by the officers and men, employed by the Road, or by the Contractors. This Rule has been found of inestimable value, in Building and carrying on the New England Rail Roads, in the construction of the Boston Water Works, and in the Navigation of New England vessels.

I propose that, at points of any difficulty, two separate sets of men (relieving each other,) be employed, to secure the continuation of the work, *night and day*, and that, *at the most difficult points*, three separate parties of men (working, each of them 8 hours a day,) be employed, *to secure continual work, without interruption, either by meal-times or by night*, employing, in all cases, as many men, as can work to advantage, and having all sorts of work going on, at the same time, for the purposes of the Road, both on the Route of the Road, and elsewhere; so that there may be no delay, which can be avoided. *This course was pursued, in bringing the Waters of Cochituate Lake, into Boston, from a*

distance of 20 *miles, through two summits and great physical obstacles :—and in the unprecedentedly short space of* 2 *years and* 2 *months, from the day the first spade struck the ground, to begin the work, the City and its Citizens found themselves, in the full use of the water, flowing through a work, calculated to endure for ages.*

The importance, in a pecuniary point of view, of using the Road, *at an early day*, is shown by appendix B, by which it will be perceived, that *the extra expense of travelling, between the United States and California, is estimated at* $67,750,000 *a year, over and above what it will be after the Rail Road is in use.*

The arguments, in favor of the plan, are fully elucidated in the appendix. By moving for this plan, the friends of the measure will, by one single effort, Viz., "*the passing of the act,*" *secure the completion of the Road, in the shortest possible time ; whereas, if they adopt any plan, which relies on funds created by the Sale of the Land ; or on a large amount of funds, from private individuals ; or on funds to be, from time to time, appropriated by Congress,—they will impose upon themselves the never-ceasing labor of Sisyphus, and by the delay waste enormous sums for the Nation.*

To secure the Loan of the United States Stock, made to the Company, and to secure the carrying forward, in good faith, of the contract made with the Company, the United States may, if they desire it, take a mortgage of the Road, and its appurtenances ; take 1–3 of the stock ; and appoint one third of the Directors, following the precedent so successfully practiced, by the State of Massachusetts, in the case of the Boston and Albany road, (commonly called the Western railroad,) in which case, as in the contemplated charter, the railroad Company do provide punctually for the payment of the interest on the public funds Loaned to them, and also are to provide, and are providing, by a sinking fund, (and occasionally by extinguishment by purchase,) for the Payment, at maturity, of the Principal of the Public Loan.

The $98,000,000 of the United States 6 per cent. Stock, loaned to the Company, being Coupon Stock, payable in London, will, (as have the Massachusetts Sterling 5's, in the case of the Western Road,) furnish, at any time of need, Exchange on England, to be sent there, in lieu of our specie, and operate as additional capital, to be used by the Citizens of the United States.

The $98,000,000 of United States Stock, loaned to the Company, (being made payable at the Rate of $2,000,000 per annum, after 50 years,) will be paid off, by the Company, with perfect ease, either by actual Profits or by the creation of new Stock, to represent the amount paid off.

THE OTHER DISTINGUISHING FEATURE OF MY PLAN IS THE CREATION, BY A SINGLE ACT OF LEGISLATION, OF ONE HUNDRED MILLIONS OF DOLLARS OF AMERICAN LABOR, BY ORDERING, IN THE VERY CHARTER, THAT THE MATERIALS USED IN THE CONSTRUCTION OF THE ROAD SHALL BE EXCLUSIVELY OF DOMESTIC ORIGIN. THESE ONE HUNDRED MILLIONS OF TANGIBLE MONEY WILL NATURALLY, DIRECTLY OR INDIRECTLY, BE DISTRIBUTED TO PAY FOR THE LABOR, THE MANUFACTURES, AND THE

AGRICTLTURAL PRODUCTS OF EVERY STATE IN THE UNION, AND WILL SET THE WHOLE INDUSTRY OF THE WHOLE COUNTRY IN MOTION.

The moment this Rail Road is made, it will be the great thoroughfare for the Mail and for passengers, from Europe to the Pacific and to India. The saving of interest (by the saving of time) and the saving of insurance, for gold and silver and for valuable goods, will secure to the Nation a great profit and a vast trade.

Whether we consider this Rail Road as an indissoluble bond of Union between greatly distant parts of our widely extended Empire; or as a means of averting European Wars and Wars with the Indian Tribes; or as a means of transporting the Mail and communicating Telegraphic intelligence; or as a measure of Internal Commerce, so vast, so varied, as to defy all precedent; or as a measure for National Glory, obtained without waste of blood or treasure, by constructing and completing, in a brief space of time, the Great work of the Age,—we are irresistably led to the conclusion, that National Glory and National Interest alike dictate the adoption, at the earliest day, of a measure calculated to obtain, for the present generation, the honor, which posterity will award to those who secure, for all future ages and by this single act of Legislation, the immeasurable benefits flowing from the existence of this Great Work.

P. P. F. DEGRAND.

We fully appreciate the importance of securing the means of carrying out this great work against the "freaks of future legislation;" and we admit that all works of this nature can be accomplished at less cost, and in a shorter time, by individual enterprise than by the general Government; but there is, in our opinion, an insuperable objection to Mr. Degrand's scheme, for it may be regarded as certain, that no act of incorporation can be obtained from Congress for this purpose; and we look upon any cheme which is based upon such an expectation as perfectly hopeless. But even if no doubt existed in respect to the power of Congress to create a corporation for this object, still, we think there are strong objections to the policy of its doing so. Will the people of the United States consent that $100,000,000 shall be placed in the hands of an incorporated company, and that this company shall control the transportation of all the commerce between the valley of the Mississippi and the Pacific ocean? For ourselves, we have none of that instinctive horror of corporations, which seems to afflict many people of the United States. So far from this being the case, we regard corporations as important agents of civilization; and in many respects necessary to its advancement. But corporations are animated by but *one idea*, and in cases where dividends constitute the main object of the corporators, this idea is pecuniary; and in carrying it out, their conduct is rarely ever restrained, or modified by patriotic or moral considerations; and as much as we desire the construction of a railway to the Pacific ocean, we should object to its

being built upon a scheme that would place so vast a power in the hands of an incorporated company. If such a measure be practicable, we certainly prefer that a sufficient provision for the completion of the work should be made by one act of legislation; but we feel no considerable apprehension from this source, for if the friends of this great enterprise shall act with reference alone to the interest and glory of the nation; if the measure shall be separated from, and elevated above party politics and sectional prejudices; if no false or disingenuous representations shall be made in respect to the probable cost, or utility of the work; and if, with a reasonable degree of information in regard to the principal facts connected with it, the people of the United States should require Congress to appropriate the public domain to the purpose of carrying it on, we should have strong confidence that such an act would be respected by all parties, and that the work would progress to its completion, without serious embarrassment from the "freaks of future legislation."

The history of the national road, of the New York canal, and other State works, has been cited to show how little confidence is to be placed in American legislation in regard to such subjects; but these cases afford no evidence that Congress would pursue a similar course in a case where the circumstances are materially different. The progress of the national road depended upon appropriations from the treasury; and in addition to the strong sentiment entertained against the constitutionality of the measure, it became involved in the revenue questions of the times, and shared in the vicissitudes incident to all party measures. The prosecution of the work on the New York canal required a large increase of the State debt—a policy that is always liable to be assailed with success; for, while high taxes afford a powerful argument to the demagogue, prudent and conscientious statesmen are ever cautious in urging measures calculated to increase the public burthens, against the objections of a respectable minority. But, in appropriating the public domain to the purpose of constructing a railway to the Pacific, we have no constitutional objection to encounter; we make no direct demand upon the treasury of the nation, nor is there any ground to apprehend that the measure will become involved in party questions; and if Congress should dedicate the public lands to the construction of this railway, and the route should be so located as to accommodate, and unite the interest of all parts of the Union, we should have as much confidence in the permanency of the appropriation as we have in the stability of our institutions.

But if the friends of this great measure still doubt the national faith, then let them ask Congress to grant to the State of Missouri a sufficient quantity of land to construct the road from the Mississippi river to the western border of the State, and also to California a quantity sufficient to construct the work from its eastern boundary to the Pacific ocean. These two sections of the road will cost, perhaps, three fourths of the whole amount required to complete the enterprise; and if this should not be deemed a sufficient guaranty, then establish a new territorial government between Missouri and California, and grant lands to that for the same object. This, we think, will remove

the great danger which Mr. Degrand and his friends so much desire to avoid. We do not propose this as a necessary feature of the measure, but make the suggestion to show that it is practicable, by one single act, to place the means for constructing the work beyond the "freaks of future legislation," without creating a corporation.

Although we have admitted, that the sagacity of individuals, enable them to carry on works of this nature at less cost than can the general or State Governments, yet, we are far from believing that the difference can possibly be so great as the amount claimed by the Boston company, for undertaking to construct a road from St. Louis to San Francisco. The following are some of the items in their bill of charge: In the first place, they ask the loan of $98,000,000, and, if we rightly understand their scheme, they expect to pay the principle, as well as the interest, from the earnings of the road; and this can be effected in a very short time, if Mr. Degrand's calculations should be realized; for, he estimates the annual income from travel alone, at over $10,000,000. And when the debt is thus paid, the road with all its profits and appurtenances, is to belong to the company; this item may therefore be set down at $100,000,000. Secondly, they ask a slip of land ten miles wide, on the north side of the road, extending throughout the line, from the State of Missouri to San Francisco, a distance of at least 2,000 miles, though Mr. Degrand estimates the whole distance from St. Louis, at but 1,600 miles. This slip would contain about 12,000,000 acres, an area nearly three times as large as the State of Massachusetts. We give no opinion in respect to the value of this land, but we are satisfied that a large portion of it is worth but little, at least in its present condition. Mr. Degrand, however, estimates that the construction of a railway increases the value of land $50 per acre, for the distance of two miles on each side of the road; this is his estimate for a road in Massachusetts; he has not informed us how much the value will be increased on the route to San Francisco, but we imagine, that he cannot value this slip of 12,000,000 acres, with the gold it contains, and the prospect of building up several large cities on it, at less than $100,000,000; and hence we conclude that $200,000,000 is about the amount that this Boston company calculate to make out of the operation; a sum however so trifling, when compared to the amount which they propose to secure to the country, that it is scarcely worth mentioning. For, Mr. Degrand proves by figures, as clearly as figures can prove anything, that this road from St. Louis to San Francisco will save to the country $67,500,000 per annum; and he affirms in capital letters, that, "if we adopt the plan now before Congress," alluding we suppose to Senator Benton's bill, "we shall inevitably delay the completion of the road, more than fifty years;" and proceeds to say, that, "the loss of $67,500,000 a year, amounts in fifty years to $3,387,500,000." Now, it does seem to us, that there must be some mistake somewhere in these calculations: but if they be correct there is only one point left for the consideration of Congress and the people of this country, and that is, whether they will accept of the proposition of the Boston company, or, submit to the utter ruin that awaits us as a nation; for if the country must be subjected to a loss of $67,500,000 a year, for fifty years, it

will become so completely bankrupt and destitute of all the agents and appliances of civilization, that no earthly arm can save it from relapsing into a state of barbarism. Surely no one will grudge the trifling sum of $200,000,000, to save the nation from such a dire calamity.

We have no desire to give a false coloring to Mr. Degrand's project; and lest we should be suspected of exaggeration, we publish the following articles which appear to have been unanimously adopted by the Boston meeting, and are appended to, and published with the address.

APPENDIX TO THE ADDRESS.—(A.)

REMARKS BY P. P. F. DEGRAND, AT COHASSET, AT THE OPENING OF THE SOUTH SHORE RAILROAD, JANUARY 1, 1849.

If we take into view the actual wealth created by the existence of a Rail Road, it will be found that the actual cost of a Rail Road is (as to the whole community) less than nothing. Take, for instance, the South Shore Rail Road. The actual rise of land on its borders, caused by the existence of the Rail Road, cannot be valued, on an average, at less than $50 an acre, for a strip, two miles wide, on each side of the Rail Road. A square mile contains six hundred and forty acres; which gives two thousand five hundred and sixty acres for every mile of the road, taking a strip two miles wide on each side of it.

The rise of $50 per acre on 2560 acres, gives an additional value to the land of $128,000 for every mile of the road. Each mile of the road, therefore, creates wealth to the amount of - $128,000
While the road only costs, per mile, - - - 28,000

Whence it necessarily follows that it costs, in fact, $100,000 per mile less than nothing.

Is not the case demonstrated beyond all doubt and cavil? Will not, in fact, the land very soon rise, in some places, twenty cents per square foot, which makes $8,800 per acre.

This rise of the land, and of other property, real and personal, right and left of a Rail Road, accounts for the facility with which thousands of millions have, within the last twenty years, become tangible, and have been spontaneously appropriated to make Rail Roads of vast extent in all parts of the world; The existence of a Rail Road not only creates the wealth which repays its own cost, but it also creates the means wherewith to build the next Rail Road.

This vast creation of wealth, by the existence of a Rail Road, will easily produce the cost of the railroad line in continuation of the south shore railroad, (via Boston,) to St. Louis, in Missouri, or to some other point in the west, and thence to San Francisco, the centre of the gold region, and the future centre of the trade of the Pacific, and of

India. Private enterprise, aided by donations, from congress, of alternate sections of land, will do much to carry this line to St. Louis, in Missouri. But, farther on, the national arm should, in its might, push unhesitatingly the great work to completion in the shortest possible time. It should do it by the mighty lever of the public credit, thus leaving private resources to fill up the manifold channels of employment opened by our late vast accession to our already vast empire.

From St. Louis, in Missouri, to San Francisco, the distance is 1600 miles. At $66,666 per mile, fully equipped, the railroad will cost $100,000,000. Let a charter with this capital be granted by congress, to a company, in which individuals take the stock and furnish $2,000,000 of the capital, obtaining from the United States the loan of United States stock for the balance. *Let this company be bound to carry the mail and to carry troops and munitions of war, on very reasonable terms*; and let congress also grant them, through the public lands, a strip ten miles wide, on the north side of the road, and let the company be bound to build the road with *American iron* and other materials *exclusively of domestic origin.*

Let us now consider what will be the consequences of such a plan :—

Thus fortified, with tangible means, the road will be built in five years. When built, its very existence will defend our possessions on the Pacific. It will avert all danger of Indian wars, north and south of its line. Upon its bed, a telegraphic wire will enable the government to issue its orders to California and to Oregon, with the rapidity of lightning—and will transmit individual correspondence with the same electric speed.

In case of a declaration of war against the United States by a European power, the instantaneous transmission of the news and of the implements of war, including even seamen, to our possessions on the Pacific coast, will give us the command of the trade of our enemy in the India seas, and enable us to protect our own.

The cost of this railroad will be more than repaid, by the additional value which it will impart to the public lands west of Missouri.

Employing iron and other materials, exclusively American, will give life and animation at once to a great mass of industry, now lying dormant.

The plan now proposed, will finish the road, in the short space of five years, because the money will be easily obtained, by the sale of United States stocks.

Another plan, which is before the public, contemplates to create the money by the sale of the land. But by following that plan, the land cannot be sold, until after the road is built, and the money to build the road, cannot be tangible, until the land is sold. The plan is therefore radically defective. If it be adopted and adhered to, 50 years will not suffice to bring the road to completion.

And what is 50 years, as to the accumulation of interest, while the road is in construction? It is an increase of its cost more than four fold. And what is 50 years, in the onward march of this mighty nation? It is, (judging from the past,) the increase of its population, from 22 millions, its present number, to the prodigious number of 88

millions. And what is 50 years, in the existence of most of us? Alas! it is the passing to the grave of more than two generations.

As to the constitutional power of congress, thus to loan the public credit, to the amount of $98,000,000, there cannot, in this case, be a shadow of doubt; because this loan is made, in pursuance to the clearly defined powers of congress, viz:—

To provide for the national defence:

To provide for the transportation of the mail, (which will be done, both on the land and by lightning:)

To take provident care of the public domain, by increasing its value; by the best known modes of internal communication:

To cement the bonds of union, between parts of this vast empire, which will be thus riveted together, by unceasing intercourse.

Mr. President:—I perceive that you are already convinced, and that you go with me and with my intelligent fellow citizens around me, for a railroad to San Francisco, and for a railroad to be used before most of us shall have departed for another world. Let us then resolve that it shall forthwith be done, and it is done; and let us say:

The south shore railroad—Its extension, via Boston, in the shortest time possible, to San Francisco, by the mighty lever of the national credit.

(B.)

RAILROAD TO SAN FRANCISCO.

[Extract from P. P. F. Degrand's remarks.] When the railroad is in operation, from Boston to San Francisco, the length of passage, for its 3,000 miles, (going night and day, at the rate of 25 miles per hour, including stops,) will, for the express train, be only 5 days.

For 1st class cars, at 2 cents per mile, the fare will be only - - - - - -	$60
For 2d class cars, at 1 cent per mile, the fare will be only - - - - - -	$30

The cost then of transporting, from the Atlantic sea-board, 150,000 persons to California, and of bringing back 50,000 persons from California, will be as follows:—

Fare of 150,000 passengers, 1st class, at $60 each,	$9,000,000
Time and food, for said 150,000 passengers, for 5 days, at $5 per day, say $25 for each person, - -	3,750,000
Fare of 50,000 2d class passengers, at $30 each, -	1,500,000
Time and food, for said 50,000 passengers, for 5 days, at $2 per day, say $10 for each person, - - -	$500,000
Total cost by the railroad line, - - -	$14,750,000

The Express train can be provided with berths and other conveniences, for the night time. It can make short stops, at convenient

places, for meals. It can be provided with newspapers, pamphlets, books, chess-boards, backgammon boards, and other amusements, as is a steam-boat. The cars can be well ventilated, night and day, by Espy's at the top, and can be lighted by lamps, serving also as ventilators. On a portion of the road, they can occasionally have a band of music.

If it be said that all the travellers will not elect to go by the express train, *night* and day, and that there should be, for their time a greater allowance than five days, the reply is, that many of the travellers will, at their starting point, be at the west of the Atlantic sea-board, as, for instance, he who starts from St. Louis, in Missouri. Starting thence, he will spend only about half the time, and pay only about half the fare of him who starts from the Atlantic sea-board; because his journey will be only 1,600 miles.

We may, therefore, safely estimate, that the above amount $14,750,000 will be the average of the whole by the railroad line.

Let us now examine what is the expense, by the sea route, for the same individuals:

To transport, by the sea route, the same number of persons, will cost as follows, part going round Cape Horn, part through the Straits of Magellan, and part through the Isthmus of Panama:—

Passage for 150,000 1st class passengers, at $150 each, - - - - - - -	$22,500,000
Time of said 150,000 passengers, for 100 days, on an average, at $3 1-2 per day, say $350 for each person, - - - - - - -	52,500,000
Passage for 50,000 2d class passengers, at $50 each,	2,500,000
Time of said 50,000 passengers, 100 days on an average, at $1 per day, say $100 for each person, - -	5,000,000
Total cost by sea route, - - - - - -	$82,500,000
Deduct cost by the railroad line, - - -	14,750,000
Clear saving in the expense, - - - - - -	$67,750,000

To this saving we may add the extra risk of life, by the sea route, and the disappointments and extra delays occasionally incident to a voyage by sea.

In point of time, of great hardships and of expense, the route by land, as it now exists, over a trackless waste, compares even more unfavorably with the railroad line.

If, then, we estimate that there will go to California annually, 150,000 persons, and that 100,000 of them will settle there, and 50,000 come back, the annual saving of expense, by having the railroad, will be $67,750,000.

IN OTHER WORDS, THE SAVING IN TWO YEARS WILL MORE THAN REPAY TO THE NATION, THE WHOLE COST OF THE RAILROAD FROM ST. LOUIS TO SAN FRANCISCO.

IF WE ADOPT THE PLAN, NOW BEFORE CONGRESS, OF BUILDING THE ROAD, WITH THE CASH PRODUCED BY THE SALE OF THE LAND GIVEN BY THE UNITED STATES, (WHICH LAND CANNOT BE SOLD AND REDUCED TO CASH, UNTIL THE ROAD IS BUILT,) WE SHALL INEVITABLY DELAY THE COMPLETION OF THE ROAD, MORE THAN FIFTY YEARS. THE LOSS OF $67,750,000 A YEAR, AMOUNTS IN FIFTY YEARS, TO $3,387,500,000; A SUM SUFFICIENT TO PAY OFF THE WHOLE BRITISH NATIONAL DEBT!

Shall this enlightened nation—responsible as we are for our high fame—tamely submit to this disgraceful and enormous loss? Or shall we avert it and show ourselves worthy of our high destiny, by the simple process of borrowing United States stock, to the amount of $98,000,000; thereby creating the tangible and efficient means of completing this great national work, in the short space of five years?"

Now we do not deny that some of the views contained in the foregoing articles are sound; but we deprecate all attempts to act upon the public mind, by publishing calculations based upon assumptions that must appear absurd to every intelligent individual. Were it possible that the people of the United States could be mislead by such arguments, yet it may be regarded as certain, that they would turn against the measure as soon as they discovered the deception; and even though in the meantime, a charter may have been granted, and the work commenced, it would scarcely protect the company in the enjoyment of privileges obtained by unfair means.

Visionary estimates, published by the projectors and friends of public works, are calculated to excite a suspicion in the minds of reflecting men, that there is either a lack of sound judgement, or a want of fairness on the part of those who thus appeal to the public for encouragement and support; and when that impression is once made it settles into a prejudice that is not easily removed. We have frequently heard the remark, that the project of a Pacific railway was a humbug: some believe it to be a political manœuvre, designed to subserve individual and party purposes; others believe that it originates in the vanity of such as desire to become famous as projectors of a grand enterprise; and there are many who regard the several propositions made by individuals, and companies, as schemes of speculation merely. It is the duty of the true friends of this great enterprise to guard themselves, as well as the measure, against all unjust imputations, and this can only be done by a fair statement of facts, sound deductions drawn from well established principles, and, a determined purpose to preserve it from the control of politicians and speculators. For should the measure be claimed, or adopted, as that of any one political individual or party, it could never rise above the strength of its patrons, and must inevetably fall with their fortunes.

Opinions and prejudices long entertained are difficult to change or remove; and it is folly to oppose them unless there be no other way to obtain our object. And hence we should not only guard against

falling into the hands of a party, but shape our measure so as to avoid, if possible, all constitutional difficulties.

In closing this article we beg to submit the following suggestions, for the consideration of our Boston friends : —

We approve of the proposition to anticipate the sale of the public domain by creating stock, to be ultimately redeemed from that source ; and if Congress will adopt this measure, and place the entire management of the work under the control of a board of commissioners, composed of men selected solely with reference to their fitness for the station ; the country would, in our opinion, have little cause to complain of their want of economy, either in regard to a judicious application of the means, or the time consumed in carrying out the enterprise. But when the work shall have been completed, it will doubtless be the true policy of the Government to place the operation of the road in the hands of individuals, or companies ; and this of itself, will open an extensive field for the enterprise of our Boston friends, which we should be pleased to see them enter upon. But being fully persuaded that the scheme of Mr. Degrand can never recieve the approbation of a majority of the people of the United States, we have deemed it our duty as friends of this great work, to state our objections to his plan in strong and explicit terms, with a hope that he and the friends of his measure, will at once perceive the propriety of abandoning a hopeless project, and bring their zeal, talents, and influence, to bear upon some plan more likely to receive the approbation of the country.

No city on the Atlantic coast, or perhaps, on the continent, is likely to be as much benefited by a railway to the Pacific, as Boston ; for if, as many believe, a large portion of the commerce and travel between Europe and Asia should be transported over this route, Boston would in all probability become the great commercial emporium on the eastern shore of the American continent ; and we think her citizens are too far-seeing and prudent, to hazard so rich a prize by adhering to a plan which is liable to so many objections.

ART. II.—A GEOLOGICAL SURVEY OF THE STATE OF MISSOURI.

This subject has been many years before the people of the State. Governor Boggs called the attention of the Legislature to it some twelve or fourteen years ago. In 1839 a recognisance of the country bordering the Osage river was ordered and made in connexion with the operations of the then existing Board of Internal improvement. Here the subject rested until the last session when a renewed effort was made, which resulted in the adoption of a memorial to Congress to aid the enterprise. This delay has arisen from the evident incapacity of the State to undertake such a work on her limited resources, and not her indifference or ignorance of its importance.

We propose, in what we have now to say, to show the grounds upon which the aid asked for by the memorial is expected to be granted, and some of the benefits that will result from it, not only to the State of Missouri, but to the interests of the country generally.

In proceeding to discuss this subject, it is not deemed necessary to enter upon a defence of this survey, Such a course would be foreign to our purpose. The beneficial effects such surveys have had upon other States with fewer natural resources, and therefore less likely to be affected by them, is a sufficient evidence of their utility. Geology is, by the common consent of the learned of all countries, admitted to be founded on principles so well established as to entitle it to rank almost as one of the exact sciences. Little inferior to astronomy in sublimity, it is in no wise so in practical importance. Although abounding in materials for theoretical speculation, it is essentially a science of observation, founded on facts, obtained by a careful study of Nature as she unrobes herself to our senses. By the co-ordination of these facts we are enabled to determine the natural resources, the position and relative value of various countries, for agriculture, mining, manufacturing, and commercial purposes.*

The interest the Government of the United States has in the soil of the State of Missouri, justifies the latter in asking and expecting this assistance. The entire area of the State, adopting Sullivan's line as the northern boundary, is 67,380 square miles, or 43,123,200 acres. Of this there was unsold on the 30th of November, 1848, the date of the last report of the Commissioner of the General Land Office, 29,766,740 acres; being more than two thirds of the entire area of the State. The established policy of the Government is to make these lands a source of public revenue. If this could be done with reasonable rapidity, it might be argued that, as a mere land speculator, with one price for her property of all kinds, she has no interest in such a survey in this State. But if the foundation for this argument were true, can we believe that our fellow-citizens in other States are so mercenary, so indifferent to our prosperity, as to justify its use. It is admitted that we live in an age of social civilization, when the progress of one part of a country in improvement reacts and tends to improve the others. Would not the development of the resources Missouri is supposed to possess, have an influence that would be felt in the manufactures and commerce of other States? Would not our national importance and independence be increased, by becoming

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* We regret we cannot entirely approve the remarks of the Editors of the Western Journal in their May—August No. (Vol. II. No. 5), in relation to the action of the late Legislature on this subject. These gentlemen have evinced so much zeal in the cause, particularly the junior, as a member of that session, that we can readily excuse, though we cannot approve their expressions of disappointment. It is possible that all was not done that could or ought to have been, but when such a good feeling appeared to exist, we are unwilling to complain. As one of the earliest advocates of this measure, we have had our disappointments, our hopes deferred so often, that we look upon the action of the last legislature with sincere gratification. And we cannot doubt, if its friends will unite earnestly and sincerely in their efforts, another session will not pass without the passage of a law for the organization of the survey.

exporters, instead of importers of the various metals and minerals she is believed to have in her mines? These and many like reasons, we believe, would present themselves to any liberal minded statesman, as sufficient to justify his vote in favor of the donation for a geological survey, even if it were true that the United States Government had no direct pecuniary interest in it.

Although such a survey would not enhance the price of the public lands, we shall show that it would cause the sale of an immense amount of them, in all probability, in a very seasonable time, that is now lying as *dead stock*. The following table exhibits the number of acres of public land in this State, that have been offered for sale or brought into market (up to the time specified in the second column) and the amount remaining unsold on the 1st of January, 1849.

TABLE I.

Land Office.	*Year of offering.*	*Acres offered.*	*Acres remaining unsold Jan. 1st, 1849.*
St. Louis,	1834	3,407,203·74	2,225,102·71
Jackson,	1835	6,515,841·76	5,860,253·27
Fayette,	1835	3,232,643·60	1,421,047·79
Palmyra,	1831	3,267,375·45	1,090,290·21
Clinton,	1832	1,717,290·84	932,985·23
Plattsburg,	1835	1,538,637·74	824,231·09
		19,678,993·13	12,353,910·30

From which we see that of nineteen million six hundred and seventy eight thousand nine hundred and ninety three acres and thirteen hundredths, brought into market on average more than fifteen years ago, twelve million three hundred and fifty three thousand nine hundred and ten acres, and thirty hundredths yet remain unsold. As the Missouri lead mines were ordered to be sold by act of congress dated March 3d 1829, we have taken a date for our table some years posterior to this that we might embrace them. We have therefore a stock in public lands, at government price representing a capital of about fifteen millions of dollars, that have been in market sufficiently long at an interest of 6 per cent. per annum to absorb their original estimated value.

The following table will show the amount of this *dead stock* sold at the several land offices of the State in 1847.

TABLE II.—*Showing the amount of land sold in* 1847, *at the several land offices of Missouri, of such land as had been brought into market during or before the years specified.*

LAND OFFICES.	B'RT. IN MARKET.	ACRES SOLD IN 1847.
St. Louis,	1834	38,626,98
Jackson,	1835	24,465,61
Fayette,	1835	22,381,37
Palmyra,	1831	15,956,22
Clinton,	1832	12,442,36
Plattsburg,	1835	11,472,42
		125,344,96

The sales of 1847, are about an average, perhaps a little in excess: of several preceding years. The sales therefore of the 12,353,910 acres, and distributed over the whole State, remaining unsold January 1, 1849, at the same rate will not equal one and three-tenths per cent. per annum: requiring more than seventy-five years! for their entire disposal, if no other incentive than now exists for their occupation be presented to the public.

But even this is too favorable a view of much the largest proportion of these lands. By a reference to table (I.) it will be seen that more than eight millions of acres of these that are unsold, lie in the St. Louis and Jackson districts; being about three-fourths of the whole amount. In that table was introduced the year up to which the offering of these lands had taken place, not specifying the period of each seperate offering. By the following table (III.), it will be seen that some of these have been in market more than thirty years, and that the average would probably be about twenty-five years.

TABLE III.—Showing the amount offered and the years of offering of the public lands in the St. Louis and Jackson districts, from 1818 to 1835.

ST. LOUIS DISTRICT.		JACKSON DISTRICT.	
Year of offering.	*Amount offered Acres.*	*Year of offering.*	*Amount offered Acres.*
1818	967,738·79	1820	119,992·80
1819	311,823·42	1821	856,649·40
1820	294,015·27	1823	2,472,877·55
1821	502,257·54	1324	1,266,542·63
1823	752,804·66	1828	127,056·92
1824	320,460·18	1831	685,133·25
1831	215,438·89	1832	247,313·98
1834	42,664·99	1835	740,275·23
	3,407,203·74		6,515.841·76

Making an aggregate of - - - - 9,923,044·50 acres.
Of which remain unsold (see Table I.) - - 8,085,355·98 "

Quantity sold - - - - - - 1,937,688·52 acres.

The annual average sale assuming twenty five years as the average period they have been in market, was therefore 73,507, 54-100 acres.* This is a little more than the actual sales of 1847 which were—

St. Louis district - - - - - - 38,626·98 acres.
Jackson district - - - - - - 24,465·61 "

Total - - - - - - - - 63,092·59 acres.

This gives: assuming the means: an average of sixty nine hundredths (69-100) of one per cent as the annual amount of the sales of these

*The statistics of this article relating to the public lands, are from the appendix of the report of the Commissioner of the General Land Office to the last session of Congress.

lands in these two districts, that were brought into market during or before 1835. At the same rate it would require one hundred and nineteen years (119)! to dispose of the remainder.

We fear we have already trespassed upon the patience of our readers too strongly by our figures, but as there are many persons who form their opinions of the importance of a country rather upon political than statistical data, we shall submit another table showing the area of several of the states of the Union, by which they will be able to appreciate the relative extent of the territory, thus doomed, if no other system than the present be devised, to more than a century's neglect.

TABLE IV.—*Showing the area in acres of Maryland, New Jersey, New Hampshire, Massachusetts, Rhode Island, Connecticut, Vermont, and Delaware.*

Maryland.	N Hampshire.	Massachusetts.	N. Jersey.	Vermont.	Connecticut.	Delaware.	Rhode Island.
7,040,000	5,139,200	4,640,000	4,384,640	5,120,000	3,040,000	1,356,800	768,000

Here, then, it is seen that the Government of the United States is the proprietor of territory within two only of our land districts greater in extent than the whole State of Maryland—than Massachusetts and Connecticut combined—and nearly equal to New Jersey, Connecticut, and Delaware united, the annual sales of which would not pay the State and County taxes, valuing it at the Government's own price, if the State had the right of imposing such taxes.

And why is it that this condition of things exists? Is this land really so worthless that it will not sell? The very reverse of this is the fact. There is not a more valuable territory within the limits of all the public lands of the United States. It will sustain a denser population from the produce of its own resources, than any other equal area in the Union east of the Rocky Mountains. The writer is well aware that these are bold assertions to be made without some published authority on which to rely. He assumes the responsibility of making them to himself. He has devoted many years to the scientific exploration of, and practical operations in this portion of the State, and therefore has had opportunity more ample than any other person to know its character. He does not present himself as a witness in this case for any feelings of vanity, but because he thinks it his duty. It would have been much more satisfactory to have appealed to other testimony, if it had existed. As a Missourian and a friend to the geological survey, he feels himself bound to assume this position. If the Congress of the United States admit the truth or even probability of this testimony, its own interest in the mere pecuniary advantage to be derived from the more rapid sale of these lands, requires that she should grant the aid asked. If it be rejected, it is a tacit acknowledgment of the belief that they are really worthless. If the latter opinion be adopted, is it just to Missouri, that they should still be held when the annual sales—not the rent—would not pay the taxes that the people of the State are obliged to impose upon themselves for the support of their government? It would be much more

just and fair to abandon them entirely to the State. If this will be done, we have little doubt but that Missouri will obligate herself to complete this survey in the most thorough-manner, without asking one dollar's assistance from any quarter.

There are two other valuable mineral regions, one bordering on the Osage river, the other in the south and south western portion of the state. In geological and mineralogical characters, they are similiar to that of the Jackson and St. Louis districts, and together probably equal the latter in extent. They were not included in our remarks heretofore because having been more recently brought into market, their history does not so clearly indicate their fate. There is nothing however, in their position or character that can justify a hope more favorable for them, than for those that have been longer before the public.

About two fifths of the entire State, say seventeen or eighteen millions of acres, may be set down as the area of its mineral region. It is not so easy to arrive at the amount of these mineral lands remaining unsold on the Osage and in the south western part of the state as we have found it to be for those in the Jackson and St. Louis district, as the districts in which they lie contain a large quantity, without their limits. But little mining has yet been done is that region, and comparatively but a small amount of land entered for this purpose. We therefore think we do not exaggerate in estimating the actual area of all the mineral lands yet held by the government of the United States and of this State at fifteen millions of acres. This is nearly equal to the entire area of the state of South Carolina; about equal to one half of New York or Pennsylvania, and more than the entire area of New Hampshire, Massachusetts, Connecticut, Rhode Island, and Delaware united!

Does the reader start at this as an enormous estimate? Let him examine for himself. Let him lay the map of Missouri down before him, let him trace a line commencing in the southern part of the state where Spring river crosses the western boundary, thence up Spring river to the waters of the Sac, down that to the Osage, along that river to Warsaw, thence north to the head waters of the Laramie, thence east to the Moreau creek, down that to the Missouri river, down the Missouri to a point about 30 miles west of St. Louis, thence across to the mouth of the Merimac, thence down the Mississippi to the Grand Tower, thence southwest-wardly to the point at which the Big Black river crosses the State line. This will give him generally the limits. All that portion of the State lying between this line and the southern boundary of the State, constitutes the *Mineral Region* of Missouri.

Compare this with the most celebrated mining districts of Europe. With the Hartz mountains having an area of only about three hundred thousand acres, equal to about twelve or thirteen of our townships of public land, a region that would be uninhabited but for its mines, sustaining a population of some sixty thousand inhabitants, with several flourishing towns. With the metalliferous mountains of Saxony (Erzgebirge) covering an area of about one and half millions of acres.

a little larger than the county of Crawford in this state—giving support to a population of nearly half a million of souls, with many large towns amongst which is Freyberg celebrated for its school of mines.* Or with Cornwall, with its arid surface of about seven hundred and sixty thousand acres inhabited by about three hundred thousand persons and whose mines produce annually about five million of dollars worth of copper ore, and five thousand tons of tin, besides a large quantity of lead.

What would be the population of this State, what the value of its produce, if its mines were as thoroughly developed as those of Germany or England? Almost every square mile in the mineral region indicates rich metalliferous dposits of the same kind. The climate is salubrious, water power and fuel abundant, and the surface of the country, unlike the arid, rocky and sterile mining regions of most countries, abounds in valuable agricultural lands.

How then is the country to be populated as rapidly and densely as it ought to be. How bring about this development of its resources in a manner most conducive to the great interests of the country? Surely every intelligent mind will concede that the first step to be taken is to investigate, and publish to the world under an authorative form, a true and full statement of its character. The experience of a quarter of a century and more, if we date no further back than the records of the General Land Office, has shown the folly of depending upon individual statements or popular reports. But the mineral reputation of this country existed long before it became a part of the United States territory. It was co-eval with the first exploration of the country by white men. A chart of Louisiana and the course of the Mississippi published in Paris in 1718 indicates this region as "*un pays plein de mines.*" If popular whims or old reports could have availed any thing, this country would long since have been teeming with population and overflowing with wealth. Prudent capitalists require better authority than these, the plain common-sense emigrant looks upon them as fabulous. In fact the antiquity of these rumors and reports do the country injury. Most men very reasonably infer that if they were true, there ought to be better evidence of it than there is yet extant.

A geological survey, made under an authority, and in such a manner as will command the confidence of the public, is the only means by which the true value of this country can be known, and its resources developed. Until it is done, it must remain, as it has been, one of the least productive portions of the public domain to the national treasury.

Thus far we have considered this subject merely with regard to the effect it would have upon the interest of the Government by the amount received from the sale of these lands. Arguments that would be proper, if it were a mere land speculation, whose connexion and even interest would cease with pocketing the money for which they sell. But they have a value far beyond this to the country; a value worthy the consideration of the statesman and political economist; and that will grow with the growth of our great and prosperous

* Vide Villefosse De la Richesse Minerale, Vol. I.

country. Let us turn our eyes but a moment to the Governments of Europe, and see with what care such property has been fostered there; with what a watchful eye its interests are guarded; and how much it adds to the character, wealth, and independence of the country that possesses it. As early as the fifteenth century, the administration of mining affairs was taken charge of by the kings of France. Francis I. declared, in an ordinance, "the working and continuation of the mines greatly concerned the king and the public weal of the kingdom." Henry IV. and Louis XIV. gave the subject their special attention, and the genius of Napoleon perfected the present enlightened and official system of that country. Frederick the Great, in 1772, published an elaborate law on the subject, divided into eighty-eight chapters or sections, evincing the most profound solicitude in relation to the mineral resources of his kingdom; "the discovery, exploration, and employment of which," he said, "must produce essential advantages to the country." In Russia, the exploration of mineral substances were reserved to the sovereign as early as 1718, by Peter the Great. Though subsequently conceded to her nobles and other persons, a guardianship over her mines is still reserved. As might be expected, the mining districts of Saxony, Bohemia, and Hanover, attracted the most sedulous care of their respective governments. In Sweden, the sovereign allows no one to carry on mining without special permission, and reserving to herself the right of supervision. The administration of the mines of Norway is similar to that of Sweden. In Spain, it is much the same.* In fact, every government of Europe seems to be profoundly sensible of the importance of their mineral resources to the public weal. England, though less ostensibly interested, watches these interests with a vigilant eye. Very recently, Parliament imposed a heavy duty on all foreign copper ores, for the protection of her copper mines in Cornwall and elsewhere.† This law, we believe, is still in force. In 1837, the duties previously imposed in favor of the Duke of Cornwall on the tin raised in Cornwall, was abolished, probably, to aid her own mines in their competition with East India tin.

The anomalous action of Great Britain is attributable to the peculiarities of her political organization, and the character of her mineral deposites. Had she been no more favored by nature than other European territory; had not such inordinate wealth been concentrated in a few hands, by her heriditory and monopolizing laws, constantly seeking new objects of investment, and stimulating new enterprises; had her monarchical form of government been more absolute like those of the continent, and her aristocracy less influential and wealthy, either she would have been obliged to adopt the system of the rest of Europe in the administration of her mines, or ere this they would have been ruined. As in so many other matters, her example has had a powerful influence on us, whilst that of other governments has had but little. In other words, we have followed so far the worst system, if system it can be called, without the advantage of the vis-

*Vide. Villefosse. De la Richesse Minerale Vol. I. p 212.
† About the year 1844 or '5.

cious laws and viscious organization of society, necessary to render it efficient and useful. But even Great Britain, after having availed herself of the individual zeal of her Merchisons, her Sedgwicks, her Phillipses, and last of her other most scientific citizens, has found herself obliged to institute a geological survey under her own authority. But we shall have occasion to refer to this matter more fully hereafter.

This uniformity of action of the European governments, must attract the attention of every statesman. It cannot be the result of accident, or preconcert of action. The cause lies deeper. It is intimately connected with the prosperity of their people and the development of the resources of the country. It is true, it is made one of the supports of the respective governments, but this is everywhere avowed and acted upon, as a secondary consideration. If this had been all they sought, a much less complicated machinery would have sufficed. Their schools and councils of Mines; their highly educated mining officers distributed every where, their national and local cabinets, &c., would all have been unnecessary. Whence public opinion *was* so little respected by rulers, it is not probable that such a system would have been adopted, solely for the purpose of mystification. Our late system of mere tax-gatherers would have been amply sufficient, and better suited to their arbitrary governments.

If then, the development of the mineral resources of a country is deemed so important as to attract so much of, and so uniformly, the attention of monarchs, is it less important to a government whose sole object should be the prosperity of the people? Is it furthering the destiny which the Creator seems to have intended for us as a nation, to neglect some of His greatest blessings?

The opportunity we have had of examining the most of the mineral regions of Missouri enables us to give a general view of its resources and character. This we propose to do briefly as it will afford the reader the means of comparing it with some of the most celebrated mineral regions of Europe, of which we will give a short description drawn from the most authentic sources. It is the misfortune of operations of this country that almost every new one presented, has to be started under the presence of a speculative excitement. We here distinctly state that it is under no view of this kind that we have undertaken to draw attention to the subject. Had such been our object we could have long since done so upon the ample materials we have accumulated. We should be sorry to see Missouri made another theatre of mining disasters of which the continent of America has presented so many examples to the world. We wish to have this State thoroughly and carefully examined and the whole of the facts, in relation to its resources laid before the public, before it shall become a scene for the exhibition of the enterprise of the people of this or any other country. This will save us from the procrastiny and injurious influence of reaction, and show to the world that in our representation we are acting in good faith and with honest feelings.

Among the first and most important considerations as to the value of every mining country, is the climate and facilities for producing or

obtaining food for its population. In both of these we have in all probability more advantages than any other important mining region in the world. Every part of this region is salubrious. Intermittent fevers so common in this latitude occurs to some extent it is true, but there are no swamps, stagnant ponds or alluvial bottoms any where in it, as in other portions of the Mississippi Valley, to constitute a permanent cause of this disease. When the country shall have become more settled and its inhabitants in the enjoyment of more of the comforts of civilized life, this will disappear. The latitude and elevation above the ocean,—from 600 to 1200 feet—gives it a more equable and regular temperature than any other portion of the valley. Its elevation enables it to catch the breezes in summer that may be wafted over the vast plains that lie around it in every direction of the compass, whilst the winter colds are tempered to a degree that permits and even invites by its invigoration, the sturdy miner to increased exertion.

Few persons who ascend the turbid Mississippi would be prepared to form a proper conception of its streams. Its myriads of springs bursting forth from their rocky wombs as pure and limpid as the drippings from the melting icicle unite in rivulets that now ripple over gravel bars and anon repose in quiet basins reflecting the foliage of the shaded banks inviting the wearied traveller to a bath, more luxurious and invigorating than all the arts and wealth of Rome ever offered to her most aristocratic citizen. Her streams would create a sigh in the breast of a manufacturer, to see such sources of prosperity wasting themselves away, whilst her rivers need but slight improvement to become the highways of commerce by steam.

Valuable agricultural land exists throughout the whole region and some of her most productive mines have been opened upon spots, that seem almost desecrated, by being converted to this purpose, Even amidst the more *hilly* region of the eastern portion where the water courses have cut their beds deep into the rocky strata to reach the level of their great absorbent the Mississippi, there are numerous beautiful and extensive valleys, that already teem with the productions of cultivation. Wheat, corn, rye and all other grains suited to this climate find here, a congenial soil, and abundantly repay man for his labor. The facility with which the present sparse population sustain themselves by their agricultural pursuits has in fact, been a serious detriment to mining operations. The certainty of the first, from comparatively slight labor, has made it too generally a primary, whilst mining has become only a secondary consideration. Where the rocky hill and hill side, presents no temptation to the farmer, for the use of his plough, nature spreads out a luxuriant growth of grasses and other vegetation as a range for his wandering herds of cattle.

But if ever this country should become so densely populated by a people devoted to mining and manufacturing pursuits, that it could not supply its own food, the contagious agricultural regions of this and other states, will ever be ready to afford it a cheap and abundant supply. It will never need the interposition of government authority, as in the sterile Hartz, to fix a price for the food of the miner. Na-

ture's God and the industry of Man will do this, without resort to the protection of Legislative action.

The exploration of this country has been too limited to justify us in presuming that justice can be done it, in describing its mineral resources. It will be one of the most important objects of a geological survey to do this, and until it is done, the facts, now possessed will only serve to form an outline as it were of the picture. The known relation of its principal metallic minerals to certain geological formations enables us to arrive at a close approximation of the area over which they may be found, but their variety may be much greater than is yet known, and their quantity can only be judged of by comparing very limited explorations, and surface indications now known with similar regions in other countries. The extensive explorations to which many of the mines of Europe have been subjected have enabled geologists to establish certain laws in relation to mineral veins and deposits, from which inferences, carrying with them the highest degree of probability, may be deduced. There is nothing in the geological or physical character of the mineral region of Missouri to render it probable that what has been found to be true of other similar regions, should not be true here. On the contrary the little disturbance that this region, speaking geologically, has been subjected to, since the deposition of its minerals, as well as the great development of the particular parts of the formation in which these minerals are found, renders it almost certain, indeed we might say absolutely certain that these laws will apply to the mineral veins of Missouri to an extent commeasurate with the extent of the formation itself.

To give a correct idea of what is known and what is probable, of the mineral resources of Missouri, we will take up each one of the more useful and important metals and speak of them categorically.

Gold as the most valuable of course takes precedence. The existence of this metal, in this State is not only not known, but so far as my observation has gone is improbable, except it be in the extremely minute quantities, in which it is frequently found, in the ores of other countries, similar to some of these in this State. If it should be found in this combination, it will never produce the moral effects that *placers* have too often produced, but on the contrary be an incentive to improvement in our metallurgic operations. We fear and we may say we hope too—that those who attempt to find gold in Missouri, will do it through the modern, not the alchemist's, process of transmutation only.

Of *silver*, we are not so destitute. It is true we have not yet found any regular silver mines, and it is even quite probable that none exists. But all of our lead ores contain silver, and some of them a considerable amount. We have analysed lead ore of this state, in which the value of the contained silver was equal to that of the lead and we have not a doubt that its extraction will some day become an important and profitable portion of the metallurgic operations of Missouri. The operation is so cheap and simple that it is not improbable it will be carried on at almost every lead furnace.

Cobalt and *Nickel* in intrinsic value properly comes next to silver amongst the more common metals, but as they are found in such com-

paratively small quantities, they are in the aggregate less important than several others that are much less in price. They would no doubt, both be much more extensively used, and particularly nickel if they were produced more abundantly. It is quite probable that Missouri will greatly increase the supply. There is one mine of them now being worked, that yields a very large produce; and there are indications of their existence, or at least of cobalt in several parts of the mineral region. The fact of its existence to any valuable extent, is of very recent discovery, and at one of the oldest mines in the State. It is very probable that when the indications are properly followed up, it will be found in valuable quantities elsewhere. We have analysed a nickel ore so entirely different from that found at the mine now being worked, just referred to, and so nearly like in all its general appearance to the ore of another metal, very common and almost valueless, that it is quite possible the mistake of the one for the other, may have caused the more valuable one to have been entirely overlooked heretofore.

Copper is destined to be one of the most valuable, if not absolutely the most valuable, metallic productions of this State. This assertion may astonish those who have been in the habit of considering lead and iron as our chief minerals, but we make it upon no vague or immaginary calculations. The ores of this metal are found throughout the whole mineral region; of every variety and generally very rich. Although the workings have yet been comparatively superficial, there is every indication of extensive and heavy lodes, that future operations will carry to depths rivaling the most celebrated mines of Europe. The indications of some of these, we have traced for miles in extent, throughout the most of which distance they passed through public lands subject to entry at one dollar and twenty-five cents per acre! Some of the mines already opened have been very productive. One has already produced from a thousand to fifteen hundred tons, another from six to eight hundred, many others smaller amounts, and yet, regular systematic mining for this metal can scarcely be said to exist. The most productive mines have not yet been penetrated to a greater depth than fifty or sixty feet. The quality of the ore, is such that it needs but little cleansing and is often smelted in the condition it comes from the mine. As yet there are but two or three smelting establishments in the State, consequently it is only in their vicinity that mining operations to any considerable extent is steadily conducted. A popular opinion, sustained as might be expected by the failure of ignorant and incompetent operators, has for some time existed, that the ores of this metal could not be smelted in this country: a debasing and unjust imputation upon the capacity, skill, and intelligence of Missourians. Why should we not smelt copper, as well as it can be done any where else? There is no deficency in the materials, no peculiarity in the ores, no secrecy in the process. Every scientific metallurgist knows the process, and the machinery used in every country; knows the materials he has to operate upon and with, and how to apply them as successfully in Missouri as in Wales or Germany. The suspicion betrays gross ignorance of the subject, and

is insulting to the character of every intelligent American. But we have no fears from the croakings of such persons, if an authoratative exposition of this region can be presented to the public; capital and capacity will combine in spite of it, and the public will only remember to pity such unworthy members of the community.

Lead is a material for which Missouri has a reputation, probably more wide spread than any other of her productions, mineral or agricultural. Mining for this metal was cotemporaneous with the first settlement of the country. Its history will embrace much of the hardships, adventures, and difficulties of the first settlement of the white man amongst the Aborigines of the Upper Mississippi valley. But it has not advanced with anything like the ratio of the settlement of the country: since 1827, it can scarcely be said to have increased at all in this State. Many causes have combined to produce this result. Those who were first engaged in it, "studious of change and fond of novelty" were drawn away in large numbers by the alluring stories of the productiveness of the Galena mines. The more extensive and less exhiustable prospects of this State were abandoned; and new explorations almost ceased. Congressional action, though well intended, had a depressing effect, and the sudden inundation of the world by Spanish lead, reduced the price from which it has never since recovered. Many of our most productive mines have never recovered from these effects. The present produce of this metal is therefore no indication of the extent of our capabilities. The ores of this metal are found everywhere throughout the mineral region, of the best qualities, and with every indication of existing in inexhaustible quantities. Their reduction being the simplest of all metallurgic operations, it needs but a proper knowledge of their extent to render this State the largest lead producing country of the world. No lead mine in this State has ever yet been exhausted, the one that has been worked to the greatest depth — about 260 feet — retains its lode as powerful, and with as favorable indications of persistence as it gave at a less depth. It must be stated that the lead bearing rocks of this State, are geologically lower in the series than those of the Galena, or Upper Mississippi mines, and therefore not subject to the interruption by the sandstone underlying that those of that region present. In fact after years of exploration, we have never been able to find anything below them but the primative rocks, which they mantle in the south-eastern portion of the State. What their thickness and consequently what the depths of ore lodes in other portions of the mineral region it is therefore impossible to tell. There is no reason to doubt but that they will some day, rival in depth as well as productiveness, the most celebrated mines of England or Germany.

Iron is another metal for which the state has a celebrity, but little inferior to that which she has for lead, and she equally well deserves it. There is certainly no state in the Union that can rival her in the quantity and quality of the ores, and facilities for the manufacture and transportation of the manufactured article. Her mines or rather mountains of specular oxide, are to be numbered amongst the most extraordinary productions of nature. To say that they are inexhaus-

tible, no more idea of them to say that space is immense. The celebrated mines of Elba, Sweden and Norway, are scarcely comparable with them. But this metal is by no means confined to the vicinity of these extraordinary deposits. Like lead and copper, it is found throughout the whole mineral region, and even extends to the coal formation occupying the rest of the State. The time is not far distant, when these iron deposits must be much more extensively wrought, or the Mississippi valley will have to seek a larger portion of its supply of iron in the markets of Great Britain. Already the foundries of St. Louis, import a considerable quantity of Scotch pig, the most inferior of iron, at a price at least double what it could be made for in this State, of the best quality.

Tin is a metal of whose existence in this State there is still much doubt. We have seen many specimens, said to have been made from ores found here, but we have never been able to obtain a specimen of the ore itself. A portion of our formations certainly bear a very close resemblance to the tin-bearing rocks of Cornwall, and of the existence of wolfram, (tungstate of iron and manganese,) a very constant attendant on tin ores in other countries, there is no doubt. Not wishing to claim for Missouri more than she certainly is entitled, we class this metal as yet uncertain. If a Geological survey should render its existence certain in workable quantities, its discovery would more than repay the country for the whole cost of the survey.

The ores of *Manganese* are very abundant, and will no doubt become an important object of exploration. *Zinc* ores, in the form of Columine and Sulphuret, are also frequently found in mining for Lead. As yet, they are considered valueless; but with the development of Metallurgic information which the manufacture of the other metals will produce, will no doubt be converted to profitable uses.

We have thus rapidly run over the most important metallic mineral productions of the State, or rather the mineral regions, leaving out the non-metallic, many of which will ultimately become very valuable. Our object is not so much to give a full view of its resources, as to present such facts as will enable us to compare it with several of the most important mining regions of Europe. So little is known on the subject, generally, we believe, by our citizens, that such a view is necessary to enable them to do justice to the natural resources of their own country.

We shall select, for description, the *Hartz Mountains*, *Cornwall*, and the metallic mountains of Saxony, (*Erzgebirge*,) as they are not only the most celebrated and best known, but because, in the variety of the mineral productions, they more nearly resemble the mineral regions of our own State.

Hartz.— As before observed, the area of this mining region is about equal to five hundred square miles, (thirteen square myriameters, *French*,) or about two-thirds the size of the county of Franklin, in this State. We draw our description of it from *Heron* de Villefosse, who held the office under *Napoleon*, of "Inspector General of the mines and smelting establishments of conquered countries," and whose elabo-

rate work, "De la Richesse Minerale," is deservedly considered the highest authority on all such subjects.

This celebrated mining region is situated at an average elevation of about two thousand feet above the level of the ocean; its most elevated point, the *Brocken*, rises to the height of near three thousand five hundred feet above the summit level. About two-thirds of it is covered with pine, (*pinus abies*,) with a little oak and beech; on the more elevated portions vegetation languishes, and trees entirely disappear on the Brocken. The aspect of the country is rude and picturesque, the air lively, and the temperature extremely variable during the summer season. From the rigors of winter to the heat of summer the thermometer (Reaumur) varies from twenty-five degrees below to twenty-five degrees above Zero. The winters are always long and cold. The Brocken is ordinarily covered with snow from the commencement of November to the last of May. There is no spring season in the Hartz; neither grains, fruits, nor vegetables, (except potatoes,) are cultivated. Food is brought from the plains below, and at a great expense. The only means of existence, is the exploration of the mines, and without them it would be uninhabited.* Its population is about sixty thousand, its mineral productions, silver, copper, lead, and iron, of which it produces annually as follows:—**

Silver,	- 35,000 marcs.†	Lead,	- 13,500,000 lbs.
Copper, -	38,000 lbs.	Iron, -	45,000 tons.

The value of which is about one million eight hundred thousand dollars.

Except silver, the productions of the Hartz, therefore are the same as those of Missouri. If we deduct 270 thousand dollars (8 dollars a marc,) for this metal, and ten thousand from its population as the proportion engaged in the extraction of this metal; we shall have the annual productions of this country from its mines of iron, copper, and lead, the same as those known to exist throughout the mineral region of Missouri, (and who can say they are any better?) amount to the sum of one million five hundred and thirty thousand dollars, and supporting an industrious and hardy population of fifty thousand people. As the area of the Hartz is only about one fiftieth (1-50) that of the mining region of this State, it would give for the latter, at the same ratio, a population of two millions and a half, and an annual produce of seventy-six millions five hundred thousand dollars; not estimating the agricultural population or productions.

Cornwall.—Some discrepancy exists amongst the authors we have consulted as to the area of Cornwall. The London Encyclopædia states it as from actual measurement at 758,484 acres. McCulloch's geographical dictionary gives it at 851,000 acres. About 200,000 acres of the interior are unenclosed and waste lands, affording scarcely sufficient pasturage for a miserable breed of goats and sheep. The surface of the country is undulating and remarkably dreary, with

*De la Rechesse's minerale vol., pages 54, 55, and 212.

†A marc is a half pound.

**Geologie applequee par A. Burat, page 195.

some picturesque valleys, smiling in a romantic diversity of corn woods, coppices, &c. The soil is extremely variable, and farming conducted in a rude manner, though much improved of late years. Being almost surrounded by the Atlantic, its temperature is very equable, the winds, however, are very variable and often violent; and the air being surcharged with moisture, harvests are late and the fruit of an inferior flavor. Grain and potatoes are the principle objects of Cornish agriculture.

Cornwall destitute of mountains, properly speaking, has however a low chain of ridges, called the Ocrinian, which forms its axes, rising into rounded summits that rarely exceed 1000 or 1400 feet above the level of the sea. These summits, which are granitic, are flanked and enveloped on their sides by a series of argilasceous and talcose slates, called in the language of the miners killas. These with numerous dikes of porphery breaking through them, constitute the principal rocks of the country, and in them chiefly are found its mineral treasures.

It is evident that such a country has but little advantage over the Hartz in furnishing its own supply of food, whilst it is much inferior to it in fuel; the scarcity of the latter, obliging the shipment of the ores of one of its most important metals to a neighbouring territory to be smelted.

The principal produce of the mines of Cornwall, are tin and copper, with some lead. As the exportation of the tin ores from Cornwall, is prohibited by law, they are all smelted there, as are also we believe the lead ores. Those of copper after having been picked and prepared until they average about 8 per centum of copper are shipped to Wales, to be smelted.

The following is about the annual average produce of these three metals:

	Tons.	Value.
Tin - - - - -	4,500	$1,750,000.
Copper Ores - - -	150,000	4,400,000.
Lead - - - - -	600	36,000.
Total - - - - -		$6,186,000.

In round numbers we may therefore estimate the annual metallic produce at six millions of dollars, of which about one fourth is from tin, of whose existence in Missouri we are not at present assured.—But Cornwall produces no iron, and but a very small quantity of cobalt, zinc or other metals of which we have such favorable indications. In the hasty comparison we are now drawing these may well be thrown in as an offset for the tin. In 1831 the population according to McCulloch was three hundred thousand. It is not probable that the increase has been very rapid, we shall therefore assume the present population at 350,000 thousand. Adopting McCulloch's figures for the area (851,000 acres) the mineral region of Missouri is about (21) twenty one times as large as Cornwall, assuming also that the produce of its mines would bear a corresponding ratio in value, and the

country sustain and require only the same ratio of population for working them and for agricultural and other pursuits, the capabilities of this part of Missouri alone would be to sustain a population of seven million three hundred and fifty thousand inhabitants producing annually one hundred and twenty six millions of dollars worth of metallic materials in their rudest state!

Saxony.—The metallic mountains of Saxony (Erzgebirge) cover according to Villefosse about fifty nine square myriameters, equal to 2278 square miles, or one million four hundred and fifty-eight acres. These mountains along almost the whole of the south and south-east frontier, nowhere rising to an elevation of 4000 feet above the level of the ocean. Their declivity is more gradual and undulating on the Saxon, than on the Bohemian side, so that they cover the greater part of the country with their ramifications. Saxony has a milder climate than most parts of continential Europe in the same latitude, the mean temperature of the year is about 47 degrees Fahr.; that of the winter quarter being 34 degrees, and of the summer 59, at an average of the whole country, which has a mean elevation of about 1100 feet above the ocean. The country has fine agricultural capacities and is well cultivated, notwithstanding which however, it is necessary to import a considerable amount of grain to supply the consumption of the people. There are about 500 mines opened giving employment to about 15,000 miners. The annual produce of these mines is as follows:

Silver -	65,000 marcs	Copper -	2,700,000 lbs.
Lead -	2,700,000 lbs.	Cobalt -	1,000,000 lbs.
Tin -	880,000 lbs.	Iron -	11,000 ton.

The principal objects of exploration in the mines of Saxony are silver. Tin and cobalt, lead and copper being only accessory. They differ therefore considerably from those of Missouri, and do not afford us the same facilities for comparison. Besides the value of the cobalt being determined, by the condition to which it is brought by manufacturing, leaves us without the means of estimating its worth as a mineral.

This country certainly presents a stronger resemblance to southern Missouri in its climate, physical characters and agricultural capacities, than Cornwall or the Hartz, and if for the purpose of comparison of population we assume Missouri capable, of which there is no doubt it is of sustaining a like ratio we should have our mineral region occupied by about eight millions of souls.

We are well aware that the parallel we have attempted to run between the mineral regions of Missouri and those three celebrated European mining regions, is very imperfect. This must necessarily be the case, even amongst those mining districts where long exploration has settled the quality and comparative quantity of the produce. Government, climate, people, country, and even the rocks in which the minerals are found—all are subject to great differences, and modify the value of the mines. In all of these, Missouri has every thing that can be desired. There is nothing, so far as these accessories are concerned, to prevent her mining operations from being as well and as profitably conducted as they are or can be in any other part of the

world. What, then, prevents their development? Nothing, that we can conceive of, but reliable information in relation to them. Is it not the interest of the Government of the United States, that this information should be obtained? Is it not of far greater national importance that this region should be inhabited by a population of five or seven millions of souls, adding every year by their labor, from seventy-five to one hundred and twenty-five millions of dollars to the produce of the country, than that it should be unoccupied, and as useless as a barren desert?

We have lengthened this article much beyond what we expected when we began, and therefore do not feel disposed to tax our readers further with the crowd of reflections that the subject presses upon us. We have, we trust, said enough to enable every intelligent mind to see and feel, as we do, the importance of this survey, not only to the State, but to the whole Union. In our next we shall show that Missouri has a right, in strict justice, to expect that the aid asked for from Congress, for this purpose, should be granted.

ART. III.—HISTORY OF THE AMERICAN FUR TRADE.

BY J. LOUGHBOROUGH ESQ., OF MISSOURI.

CHAPTER IV.

Discovery of the North West coast—Balboa—Magellan—Cortez—Spanish voyages to the North West coast—Scheme of Peter the Great—Catharine 1st—Voyages of Behring and others—first voyage from America to Asia—establishment of trade across the Pacific—Jealous policy of Spain—resisted by Elizabeth—English Buccaneers—Adventures of Oxenhave—Voyage of Drake—Voyage of Cooke—Origin of Russian fur company—Russian Amreica—Adventnres of Capt. Sutter to California—Organization of the Russian Company—Remarkbie escape of some Polish exiles from Kamschatka.

The discovery of the northwest coast of America was a consequence of the successive attempts which followed the immortal expedition of Christopher Columbus, to discover a western passage to India. In the year 1513 Vasco Nunez de Balboa, one of the most daring adventurers of an age celebrated for its maratime discoveries, beheld for the first time from the isthmus of Darien, the measureless expanse of the great ocean of the west. This interesting discovery gave rise to the famous voyage of Fernando Magellan a Portugese in the service of Spain who passed through the strait which now bears his name into the western ocean to which he gave the name of the

"Pacific" because of its freedom from the violent storms of other great seas. Over this ocean he pursued his way to India, *thus solving the great geographical question whether the earth was a sphere and capable of being circumnavigated.*

During the absence of Magellan the wealthy and splendid monarchy of the Aztecs which had been discovered some years previously by a party of adventurers from the Spanish colony on the island of Cuba was conquered by Hernando Cortez the greatest captain of the age and brought under the dominion of the crown of Spain. It does not come within the scope of our design to enter upon a detail of all the Spanish voyages of discovery along the northwest coast of America; but as many of these voyages were undertaken for the purpose of opening trade with the natives, and as it is upon the discoveries then made that the title to Oregon derived to us through our treaty with Spain is founded it will be interesting to the reader to have their results briefly summed up. The first of these expeditions were fitted out by Cortez himself, his restless ambition prompting him constantly to new conquests and new discoveries. The others were set on foot by his successors in the government of new Spain (as Mexico was called) chiefly under direct instructions from the Spanish ministry. It will suffice here to state that between the years 1528 and 1595, no less than six considerable voyages were made from several points on the west coast of Mexico, under the command successively of Maldonado, Mendoza, Gryalvo, Cortez himself, Ulloa, and Alarcon, and that in these voyages the Spaniards touched upon various points upon the coast as far north as the 43d degree; and *thus acquired an indisputable right under the law of nations to the whole coast as against other civilized people*; and that in 1774 and from that year to 1779 three more voyages were made under Perez Heceta and Arteaga and Bodega as high north as Nootka Sound. These last voyages *all preceded the discoveries of any other power on this coast between the 43d and 53d degrees.*

The Czar Peter the 1st of Russia whom posterity has justly surnamed the Great having entered into a treaty with the Emperor of China for commercial intercourse between his Asiatic possessions and the latter country by caravans, conceived at the same time a gigantic scheme of ambition. This was to ascertain whether the continents of Asia and America were or were not united at the extremity of Kamschatka; and if they were, to invade the establishment of the French the English and the Spaniards on the latter continent by directing his military forces by that route. The ostensible and subsidiary purposes of the Czar, were the extension of geographical knowledge and the encouragement of the fur trade. Unhappily for the fame of the great prince, and the welfare of a people whom he had raised from the depths of barbarism, death cut short his career before this magnificent project could be realized. But upon his death-bed he drew up, with his own hand, instructions to Admiral Aprasin, and an order to have them carried into immediate execution. His widow and successor, Catharine the First, appreciated and respected the great design of the Czar, and resolved to carry it into effect. Under her orders the first voyage of discovery was made by Vitus Behring, (a Dane,) who sailed

from Kamschatka in July, 1728, and followed the coast of Asia northwards into the Arctic Sea, passing through the straits which have since received his name, and within a few leagues of the American continent, but without being aware of the fact. In the ensuing year he attempted to sail directly east, but was driven back by storms. In June, 1741, Behring again sailed from Avatscha, by public authority. In this voyage, he discovered and named Mount Saint Elias, the highest peak upon the continent, being 18,000 feet above the level of the sea; and passed through the Aluetian Islands, touching the continent as low down as the 53d degree. During this voyage Behring died, and his vessels were taken home by the second in command. These voyages made known to the people of Eastern Asia the valuable furs of the north-west coast of America; and thus originated the fur trade there, which has grown up slowly to its present importance. Several other voyages were subsequently made by the Russians, but none of much consequence. *It is on these that the title of Russia to American soil is founded.*

After a number of abortive attempts by the Spaniards, to acquire a permanent position in the east, they at last succeeded in doing so. In 1564, the Phillipine Islands were subjugated by Miguel de Lagaspi, who made *the first voyage from the west coast of America to Asia.* In these islands the Spaniards forthwith established solid military stations, and opened a direct trade from the west coast of America to the East Indies.

In that age the Popes of Rome assumed the authority of dividing out, by their Bulls, all newly discovered lands. The authority of his Holiness to do so, was, for a long period, acquiesced in by all the European powers, and by none with more zeal than the monarchs of Spain. Founding their right upon these grants of the Pope, the Spaniards, for a long time, enforced a rigid exclusion of all other powers from the whole Pacific ocean. The system worked well enough for a short period, but when the English threw off the Papal yoke, they immediately commenced taking measures to encourage their traders to round Cape Horn. Queen Elizabeth formally demanded of the Spanish Crown the recognition of the right of her subjects to navigate any part of the ocean. But her demands having been resisted, this wisest and haughtiest of queens, as well as most jealous and termagant woman, immediately asserted their rights, by furnishing them with every facility for, and inducement to, the violation of the Spanish regulations.

This policy of the British Queen, gave birth to one of the most remarkable classes of men who have figured in maratime adventure. In a short time a large number of vessels were fitted out by private individuals, with the purpose of cruising in the Spanish Main, as the West Indian and adjacent seas were called, manned by a set of daring, reckless, and unprincipled men, with the avowed design of robbing, taking, and sinking every Spanish vessel upon which they could lay their hands. As their conduct was countenanced by their own government, they did not incur any other danger than that to be apprehended from the power and the courage of their enemies; and this was laughed to scorn by these bold buccaneers. For many years the

free-booters cruised through the Spanish islands, destroying shipping, murdering their prisoners, and plundering the colonies upon the coasts. At length, one of these reckless rascals, named John Oxenhave, wearied of the life upon the Spanish Main, where prizes of great value were becoming scarce, resolved to cross the Isthmus, build a vessel, and cruise in the Pacific with the hope of laying hands upon some of the rich galleys which then plied between Acapulco and the Phillipine Islands. The inroad took the Spaniards so much by surprise that Oxenhave succeeded in capturing a number of valuable cargo's before any measures could be taken to arrest his progress. This adventurous scoundrel with his crew finally fell into the hands of the Spaniards by whom they were ignominously executed.

Their dreadful fate was amply revenged by Sir Francis Drake, who sailed from Plymouth in December 1577, with five small vessels procured and armed by himself and other private individuals, for the express purpose of making a predatory voyage into the Pacific ocean. The governments of England and Spain were at peace, but this fact did not deter the former from giving every encouragement to these plundering excursions. In the fall of 1578 Drake passed through Magellan's straits. Soon afterwards his little squadron was dispersed by a storm leaving him with only one schooner and about sixty men. This calamity did not deter him from the object of the expedition, on the contrary it prompted him to more vigorous and active efforts. After plundering and burning with ruthless malice every ship he could find, and every Spanish settlement at which he could land, he determined to seek a northern route for his return to England. For this purpose he coasted along as high up as the 38th degree when he suddenly diverged directly across the Pacific to the Phillippine islands from whence he made his way by the usual Portugese route, and arrived in England in September 1580 reaping the honor of being the first navigator who had sailed entirely around the Globe.

But it was not until after the celebrated voyage of Capt. Cooke upon which he sailed in July 1776 that the immense wealth to be acquired by the fur trade on the northwest coast became fully known to the people of England and America. The details of this great voyage are too well known to need repetition here. The journals of the expedition were published at London in 1785. The information they contained respecting the abundance of the finer furred animals on the north-west coast attracted the attention of enterprising men in all the maratime countries. At that period the fur trade was carried on exclusively by the English and the Russians, the former from its possessions in the northern and eastern portions of the American continent and the latter from Siberia and other northern districts of their immense empire. The Russians then conveyed their furs to China over land. Those obtained by the British found their market in Europe only; no shipment to the east having as yet been undertaken.

The Russians were the first to take advantage of the rich fund of information supplied by the voyage of Cooke from whom they had derived it during the stay of the British vessels at Petrapalowk and Unalashka. In the years 1781 an association was formed by Gregory

Schelikoff, Ivan Galikoff, and other principal fur merchants of Siberia and Kamschatka. They equipped their vessels for a voyage of trade and exploration which sailed from Ochtatsk in August 1783, under the command of Schelikoff. This expedition lasted for three years, during which time they proceeded as far south as Prince William's Sound, and several colonies and factories were established, and especially one on the large Island of Kosciusko. The Russians however treated the natives with great barbarity. In 1787 they also erected trading posts on the shores of Cook's river. In 1825 the company possessed a capital of £260,000. Their factories are collections of huts surrounded by palisades similar to those constructed by the Bay company. Russia claims in virtue of the settlements and discoveries of her subjects and of treaties with the United States and Great Britain all the coasts and islands of America north of the parallel of 54° 40′, and so much of the continent as lies west of the 141st meridian of longitude from Greenwich. This portion of the continent presents the most savage and gloomy appearance. Above a long line of hills covered with pines and birch, rise naked mountains shrouded with enormous masses of ice which frequently roll in avalanches from their summits, descending with terrific sounds to the vallies and ravines, crushing in their course whole forests, and damming up streams and rivulets.

In the year 1839 the charter of the Russian American fur company was renewed for twenty years. This Company have attempted some settlements farther south for the purpose of supplying themselves with grain and vegetables; but its attempts have proved unsuccessful. One of these was a location near the Bay of San Francisco. About the year 1830 this establishment consisting of a number of cattle with agricultural implements and a number of pieces of artillery was sold to Capt. Sutter, a gentleman of enterprising character, who emigrated from Jackson county, Missouri, and established himself there where by the exercise of alternate kindness and authority he has succeeded in inducing the Indians to become a peaceable and industrious people. Until the commencement of the American settlements in Oregon the Russian supplies were furnished by the Hudson's Bay company.

The inhabitants of the islands are all regarded as the immediate subjects and serfs of this company. The other natives are free except that they are not permitted to trade with any other people, and a portion of them near Cook's Inlet and Prince William's Sound, are compelled to pay an annual tax in furs and skins. The company confine themselves exclusively to the fur trade. They have about twenty-six trading establishments. The furs and skins are collected either by hunters in the immediate service of the company, by taxes upon its subjects, or by trade with the free aborigines. The furs are transported to Petropawlowsk in Kamschatka, or Ochotsk in Siberia, and thence over land to Russia, or by permission of the Chinese government to Canton, and occasionally to other parts of Europe. In 1826 the number of Russians in this territory was 730—the native subjects of the company were fourteen hundred and forty-two *half-breeds* by Russian fathers and native mothers—and about eleven thou-

sand aborigines of the Island. The number of the natives upon the continental territory is unknown, but it must be very small. The number of vessels belonging to the company in 1840 was 12, measuring altogether fifteen hundred and sixty-five tons.

For the convenience of trade the company have divided their territories into six distinct districts, each of which is placed in charge of an agent whose duties are similar to to those of the overseers of *the Beats* of the Bay company; and the whole of them are superintended by a Governor General who resides at *Sitka*, the capital. Then ames of those districts are *Sitka*, *Kodiak*, *Michaelof*, *Aliaska*, *Unalashka*, and *Actha*.*

In the year 1771, a party of individuals, chiefly Poles, were confined in the garrison of the small town of Bolcheretsk, in Chamskatka, where they had been exiled for political offences, soon after the disgraceful partition of Poland by the European powers. Among these exiles was a Hungarian count, named Maurice de Benyowsky, who had been an officer in the Polish service, and was exiled for the part he acted in some of the efforts of that unfortunate people to recover their liberty and nationality. Many years after the incident we are about to relate, the memoirs of the count, written out by himself, were published in London, and contain, among a variety of other surprising adventures, the following facts.

Benyowsky, having watched, with strict attention, all the movements of their guards, and contrived, by some means, to inform himself of the fact that a vessel was lying in the harbor, and that there was a prospect of success, imparted his scheme to his companions in exile, by whom it was warmly approved, At the appointed time, a bold effort was made by these desperate men. The garrison was overpowered by them, after which they took possession of the vessel, loaded it with furs, and such other plunder as they could lay their hands upon, and put out to sea. As they had no compass, they steered pretty much at random. At the outset they were driven northward as far as near the 66th parellel, and during this part of their voyage they frequently saw the coasts of the old and new continents, and touched at a number of the Aleutian Islands. At Behring's Isle they discovered another party of fugitives, like themselves, who had escaped to this desolate spot, and taken possession of it, under the command of a Saxon; and at Unalashka, the largest of them, they found the crosses, with the inscriptions, erected by Krenitzen, in 1768. Turning southward, they touched at the Kenile, Japan, and Loochoo islands, and at Formosa; and finally, in September, they arrived at Canton. *This was the first voyage made from the north-east coast of Asia to a port southward, frequented by European vessels;* and they took *the first furs which ever reached any part of China by sea.*

Count Benyowsky subsequently engaged in a variety of other romantic and daring adventures, the principal of which was the last. This was an attempt to make himself sovereign of Madagascar. He

* Further details may be found in Mr. Greenhow's History, but the author deems them unnecessary here.

landed upon that island, where he figured largely for some time, and took upon himself the title of king; but he was at length killed by a French expedition from the isle of Bourbon, at the head of a party of Europeans and natives, at Foul Point, in that island. The truth of his narrative was, for a long time, much questioned, but his statements have been considerably confirmed by more modern navigators.

CHAPTER V

Scheme of John Ledyard—Commencement of trade from Oregon to China—Voyages of Hanna and Peters—of Lowrie and Guise—Tipping—King George's Sound Co.—The Sea Otter Boston Co.—Voyage of Meares—Voyages of Martineze and Haro—Nootka Sound Convention—Voyage of Vancouver—Expedition of Metcalfe—His difficulties at the Sandwich Islands—Sacrifice of a sailor to their Gods---Destruction of 150 Islanders---Plunder of the Fair American, by the natives--Murder of young Metcalfe---Gov. Young--Jemmy Doolin's history and adventures.

The next attempt to profit by the results of Cooke's voyages, was the one made by John Ledyard, the celebrated traveller. He had served as one of Cooke's crew, and had thus become fully informed upon the subject. In 1782, Ledyard escaped from a British vessel near New York, in which he had been compelled to serve against his own country. Soon afterwards upon his representations to Robert Morris the great merchant, and famous financier of the American Revolution, the latter agreed to fit out a vessel to be employed under his direction in the fur trade of the north Pacific. The pecuniary embarrassments of Mr. Morris, rendered the attempt abortive, and Ledyard proceeded to France, in 1784, where he endeavored to interest and obtain the assistance of that Government in his scheme. Although they refused to give him any encouragement, the French ministry did not fail to take advantage of the information derived from him, by instructing La Peyrouse to explore the north-west coast, in order to obtain farther information respecting the fur trade. Ledyard, subsequently, by the advice of Mr. Jefferson, undertook an overland journey through Kamschatka, intending to cross Behring's straits, and return across the continent to the Atlantic sea-board. After proceeding as far as Irkutsk, although he had been furnished with a passport, through the influence of Mr. Jefferson, he was suddenly arrested by order of the Empress, with the characterestic jealousy of that Government, and conveyed to the frontiers of Poland, where he was liberated and enjoined never again to set foot upon the Russian territory. Most probably this was done through the intervention of the Russian fur company. On the 15th of the following November, Ledyard's ambitious and adventurous career, was end-

ed at Cairo, (Egypt,) on his route in search of the source of the Nile, under the auspices of the African association of London.

The first individuals who actually engaged in the direct trade between the north-west coast and China, were British subjects sailing under the Portuguese flag. False colors were assumed, because in that age of darkness and monopoly in commercial enterprise, the East India company were incorporated with the exclusive privilege of trading into the eastern seas beyond the Cape of Good Hope; and the south sea enjoyed a like exclusive privilege in respect to the Pacific ocean beyond Cape Horn. The first of these voyages were made by James Hanna, in 1785, and by Capt. Peters, in 1786, but without any profitable results. Similar abortive voyages were made in the year following, by Captains Lowrie and Guise from Bombay, and Captains Meares and Tipping from Calcutta, under the flag of the East India company.

In 1785, an association was formed in London, called the King George's Sound company. They entrusted two ships to Captains Dixon and Portlock. The object of this company was to monopolize the direct trade between the north-west coast and China. For this purpose they purchased a license of the south sea company, and their agents were instructed to ship the furs to Canton, where they were to be assisted in the sale of them by the agents of the East India company, in accordance with a contract made with them; and the proceeds invested in teas and silks for the European markets. Portlock and Dixon proceeded to the north-west coast where they found Capt. Meares frozen up in Prince William's Sound. The latter alleges, that he was inhumanly treated by them; but they solemnly avow, that they rendered him every assistance in their power. Be this as it may, after collecting a large cargo of furs, they directed their course to Canton, where they found the market so glutted (probably from Russia,) that their prospects of profit was quite slender; and this fact taken in connection with the frauds which they asseverate were practiced upon them by the agents of the East India company, occasioned so much loss that the very expenses of the voyage could not be covered. In the meantime, previous to their return, the company in London with their imaginations filled with golden dreams, fitted out two other vessels and placed them in charge of Captains Duncan and Colmett, who followed the course of their predecessors, and ultimately incurred a similar loss from like causes. These disasters disheartened the company and they abandoned the enterprise.

In the year 1780 the sea otter was first introduced into the market of China. The skins brought such enormous prices that a number of American and British expeditions to the northern islands of the Pacific, to Nootka sound and the northwest coast were immediately undertaken. The trade in the sea otter so far as the Americans were concerned was carried on principally from south Georgia; up to this time nearly one and a half millions of skins have been taken from that island alone, and nearly an equal number from the island of Desolation. The discovery of the south Shetlands in the year 1818 added aston-

ishingly to this trade. The number taken from thence in the years 1821-2 amounted to three hundred and twenty thousand. At certain seasons these amphibia, for the purpose of renewing their coats, ascend the rocks and precipices where there is no trace of vegetation, and there remain near two months without sustenance when they return much emaciated to the sea.

In the year 1787 some merchants of Boston formed a company for the purpose of combining the fur trade of the north Pacific with the China trade as attempted by the King George's sound company. To effectuate this scheme the ship Columbia of two hundred and twenty tons burthen, and the sloop Washington of ninety tons burthen, were fitted out at Boston and laden with blankets, knives, tin ware and other articles adapted to the trade with the Indians. The Columbia was commanded by John Kendrick to whom was given the direction of the expedition. The master of the Washington was Robert Gray. They were provided with sea letters issued by the Federal Government with passports from the state of Massachusetts—and with letters of recommendation from the Spanish Minister. The two vessels sailed in April 1787. The Washington made the northwest coast in August 1788 near the 46th parallel where she was grounded in attempting to enter the mouth of the Columbia river, and then furiously attacked by the savages who killed one of her crew and wounded the mate. She then succeeded in escaping and making into Nootka sound. Her consort the Columbia having been separated from her in a storm did not succeed in reaching this place until some time subsequently. Here they remained a number of months and then sailed west to the East Indies with furs. Whilst at Nootka the occurrences which led to the rupture between England and Spain took place, and Gray and Kendrick witnessed the whole affair.

In 1786, the Spanish government, becoming very jealous of the operations of the fur traders on the north-west coast, determined to put a stop to their proceedings. At first, an attempt was made to monopolize the whole trade, by despatching an agent along the coast, with an ample capital to purchase the whole of the skins from the Indians; but this scheme failing for want of means, and in consequence of the superior energy of the rival traders, more decided and efficient measures were resolved upon. The Viceroy of Mexico, acting under the order of the council of the Indies, despatched Esteran Martinez and Gonzalvo Haro, with two armed vessels, to follow the coast, warn off the traders of other powers, and, if necessary, assert the sovereignty of Spain by force of arms. They proceeded as high as Nootka Sound, on the west side of Vancouvier's Island, where they found a number of American and English vessels. Here they landed, and erected some temporary works for occupation. In a short time after, Capt. Cobnett, who was employed at Macao, by a new company of traders — put in charge of a vessel for Nootka Sound, and instructed to land there and erect a fort for the occupation of the agents of the company — arrived in Friendly Cove. Upon landing, and making his purpose known, the design was objected to by the Spanish officers, and they decoyed the Captain on board their vessel, where they made him prisoner, seized

his vessel, the Argonaut, with her crew, disarmed them, and conveyed them as prisoners to San Blas. Besides this vessel, some others were also seized by the Spanish commandants. The important results of this decisive movement, were most probably but little anticipated.

Three years subsequent to these events, the governments of Spain and Great Britain having, in the intermediate time, been informed by the parties concerned, of what had occurred, entered into a recriminating correspondence, which well nigh ultimated in involving the two powers in open war, and would have done so, but for the peculiar relations of France to the two powers. Spain, feeling herself in imminent danger of an immediate rupture, made a formal call upon the King of France, for the aid stipulated for in the *Family Compact* between the two branches of the House of Bourbon. The call found Louis the 16th in the midst of the terrible revolution in which, at a later period, he was dethroned and beheaded, and, of course, in no condition to do more than submit the subject to the consideration of the National convention, then virtually the sovereign authority. During the progress of the negotiation, the democratic tendencies of the French Revolution were so rapidly developed, that Mr. Pitt became solicitous to avoid a rupture with Spain, and, if possible, to lay the foundation for an alliance, in the continential whirlwind of which he foresaw the approach. His agent was, therefore, so instructed that the French were flattered with the idea that they were the umpires in the controversy, and the Spaniards still more flattered with the notion that Great Britain was deferring to her demands. The negotiation, thus ably conducted, eventuated in the treaty of the Escurial, signed on the 28th October, 1790 — known generally to history as the Nootka Sound convention. *This is the first treaty or convention ever entered into by civilized powers, respecting any portion of the north-west coast of America.* In this treaty, the Spanish claim to the exclusive commerce of the Pacific was abandoned, and an equal right to trade upon the north-west coast secured to both parties.

For the due execution of this treaty, Captain Vancouver was despatched by the British government to Nootka. In addition to this duty he was ordered to survey the whole coast, from the 35th to the 66th parallel; to ascertain generally, the character of the natives, and their condition, *and especially to discover if any water courses could be found, the heads of which approached sufficiently near the Rocky mountains to establish a commercial connection between the territories of Great Britain east and west of these mountains.* This last sentence the reader is desired to bear in mind, because, in a future chapter of this work it will become our duty to correct a considerable error which an author of distinguished abilities has fallen into.

The second adventure in the fur trade of the north Pacific from the United States, was that of Captain Metcalfe, who sailed from New York, in the brig Eleanora, in the year 1788, bound for Canton. At Canton he purchased a small schooner, which he named the Fair American, and placed in charge of his son. After winding up his affairs, himself and son made sail for the north-west coast. They arrived at Nootka Sound in November, 1789, where the schooner was

seized by the Spanish commandant, Martinez. Unfortunately for her crew, she was soon liberated. On the voyage from the American coast, the two vessels were, by some accident, separated, and the Eleanora, in the ensuing January, put into a small bay in Mowee, one of the group of the Sandwich Islands, where she anchored. The same night her boat and a seaman, who happened to be asleep in it, were carried off by the natives. The following morning the whole shore swarmed with the islanders, fully armed and painted, according to savage custom, in such manner as to strike terror into the beholder. They manifested an evident disposition to take the vessel, if possible. One of them was detected in an attempt to tear off a piece of her copper, supposing, as he subsequently confessed, that this would occasion the vessel to sink. The audacity of the natives at length proceeded so far as to exhaust the patience of Captain Metcalfe, and he fired upon them a round of grape shot; and then landed and burnt their village. Some days afterwards, he had proceeded farther up the bay, with the view of taking in water, and whilst there, a native came on board the vessel, and proffered, for a reward, to return the boat and the missing sailor. His offer was eagerly accepted by the Captain, who felt much sympathy for the unfortunate seaman. On the following morning this native returned with some pieces of the boat, and some of the bones of the sailor, who had been cruelly sacrificed to some of their bloody deities, and with consummate assurance, demanded the promised reward. It was an exquisite piece of impudence, and well deserved prompt and signal revenge, but the Captain deemed it prudent to pocket the insult, and comply with the demand for the sake of peace. The effect was precisely the reverse of what was anticipated. The Islanders, imagining that they had intimidated the ship's crew, manned a large number of canoes, and again surrounded the vessel. Metcalfe, becoming exasperated, fired all his guns, charged with grape shot and nails among them, and killed, as was estimated, more than one hundred and fifty, and then set sail for Owyhee. Whilst the vessel lay here, the natives signally avenged the destruction of their brethren at Mowee.

On the 5th February the Fair American anchored on the north side of the island near thirty miles from her consort and commenced trading with the natives. The conduct of the natives exciting no suspicion, they were permitted to enter the vessel at their pleasure. A chief named Kamamoko came on board with the professed design of presenting the captain with a feather cap as a compliment. Whilst pretending to place the cap upon young Metcalfe's head he seized and threw him overboard when he was instantly killed. All the seamen with one exception were killed in like manner and the schooner was then drawn on shore and rifled. The natives denied that at the time of this massacre they had any knowledge of the affair at Morveo, and the chief stated afterwards that it was by way of revenge for ill treatment previously received of young Metcalfe. The Eleanora was saved from a similar fate by John Young, the boatswain, who remained upon the island and subsequently became Governor of Owayhoe. This is the same individual whose executive character is mentioned by Mr. Irving in his astoria.

The mention of Governor Young, brings to our recollection the story of another eccentric, an Irishman named Doolin who was also a sailor on board the Eleanora, but who did not take a fancy to the life of a savage until a much later period. In the spring of 1843 the emigrating company having some days the start of us, we entered the Indian territory alone, and travelled some days ere we overtook the caravan. The second morning of our trip we awaked at day-light, and confess we were alarmed as well as astonished to see an old man of the rudest appearance and a fierce aspect. This singular looking being eyed us for some time with a fixed and steady gaze, without betraying the slighest apparent feeling, although our own countenance must have evinced violent emotion. Suddenly he started up as if from a reverie, and inquired gruffly whether we were about going to the emigrating company. Finding that we were, he remarked that he would bear us company. No proposition could have been more disagreeable at the moment, but this proved one of the frequent instances in which our first impressions lead us into false conclusions; for in the same space of time, we have never before or since derived more of information and amusement in our life. It seems that this strange individual was a boy on board the Eleanora when John Young left her to join the natives; and he stated that nothing but fear saved him from following the fortunes of that queer adventurer. Upon the return of the vessel to the United States, he again shipped as a seaman on board the Columbia, of Boston, commanded by Capt. Robt. Gray. The Columbia sailed in Sept. 1790, and arrived at the entrance of the strait of Fucca early in the spring of 1791. She remained along the coasts until the September following, engaged in trading and exploring. This voyage of Gray was the one during which he ascended the Columbia river some distance; *and upon this fact much of our claim was based, in our late controversy with Great Britain respecting boundaries.* At Clyoquot the crew of the Columbia remained during the winter, where they erected on the shore a defence from Indian depredation, which they named *Fort Defiance;* and employed themselves in building another small vessel, which was launched and named the *Adventure.* Whilst preparing for sea, they were visited by Tatuchseatiurs and Wicanish, the principal chiefs of the neighboring country, between whom and an Islander the captain soon discovered rather a suspicious intimacy. Upon threatening and questioning the Islander, he finally confessed that the Indians had proffered to make him a great chief if he would wet the primings of all their guns at a particular time, and thus enable them to seize the vessel. After this the savages were kept at a distance. Here commences the curious portion of our Irishman's history. One night some days previous to the sailing of the vessel, he was occupied near the stern, in arranging some small articles of his own. It was cloudy, but not absolutely dark. In turning suddenly around to answer the call of a mess-mate, he struck his foot against a block, and ere he had time to take a thought, found himself under the surface of the ocean, heels upwards. When he succeeded in reaching the surface, he discovered that the current had driven him some distance from the

vessel, and he therefore determined upon making the shore as the only hope of restoration. Here, however, the Indians were lying in ambush on the watch for prey. He was immediately seized, and claimed by Wicanish as his slave, without hope of future liberation; for these Indians enslave only those whose heads are round, their notion being, that the true mark of aristocratic birth and education is a flat head, and it was evidently too late in the day to remould that of the Irishman's. He was transferred from tribe to tribe, until he reached the Oakinagar river, where he actually remained until after the establishment of Frazer's trading post, on the river of that name. The spokans being round-headed, restored him to liberty, gave him a wife, and naturalized him. By these traders he was found, and eventually carried across the continent to Canada. But the habits he had acquired among the Indians, could not be thrown off. He never after went to sea, but lived wholly with the Indian tribes in Canada, roving from one band to another. When we saw him he was making his way back to Oregon, to end his days with his first red friends the Spokans.

In the north Pacific the direct trade between the American coasts and China remained almost exclusively in the hands of the Americans until the year 1814, when the condition and future prospects of this trade were totally changed by the late war with Great Britian. At the former period British merchants were restrained from engaging in this trade by the opposition of the East India company, the Russians were not then admitted into the ports of China; and few ships of any other nation were ever seen in that ocean. The only rivalry experienced by our traders was the overland trade carried on from Siberia into China in accordance with the arrangements of Peter the Great with the Emperor of China.

We have not attempted to enter into the details of these expeditions by sea for the prosecution of the fur trade, although they are full of incidents of the most interesting character. Our space would not allow us to do so. Nearly all of them however were designed to carry out the same system of trade which was to carry goods to the northwest coast, exchange them with the natives for furs, proceed thence to Canton, again exchange the furs for tea and silks, and finally return with these articles for the supply of the European and American markets. We have only noticed the fact of their arrival on the northwest coast for the purpose of marking the progress of the fur trade. Those who have a taste for such reading may find all these voyages scattered through a multitude of collections of that kind.

ART. IV.—SCOTCH AGRICULTURE.

The following is the conclusion of a series of interesting articles on Scottish agriculture from the pen of George B. Davidson, Esq., of Illinois. The writer has given an excellent turn to his subject and in its application to the condition of this country has illustrated some of the more important principles of political economy in a manner so simple and clear that the most stupid and prejudiced minds must perceive and appreciate the importance of encouraging the useful arts at home, instead of looking abroad for the most common articles of convenience and comfort. We cannot too highly recommend the study of these articles to our western readers.

SCOTTISH AGRICULTURE APPLIED.

BY GEORGE B. DAVIDSON, OF ILL.

Introduction--Advantages of a home market--Means of enhancing the value of land--Establishes mutual dependence between the producer and consumer--a distant market decreases the value of lands--Manufactures--Importance of estsblishing them in the west--Extracts from Marryatt's Diary--comparison of manufacturing and non-manufacturing countries &c.

In commencing our articles on Scottish agriculture, we stated that our chief object was to excite an inquiry into the causes of land being more valuable in Scotland than in Missouri, or any of the western states? and also whether the means are attainable, by which the latter may be made as valuable as the former. It will be seen, by our first communication on this subject, that the Scotch farmer pays a high annual rent for the privilege of the soil, and this rent the productions of the farm must be adequate to discharge. Hence there is an absolute necessity for a ready market and a good price, without which the farmer could not posssibly meet his engagements. But a ready market there always is,—and most generally a good price. It is true that the operations in *Mark Lane*, will occasionally cause prices to fluctuate, and thereby sometimes affect those whose circumstances compel them to sell when the price is low. A low price however continues but a short period; and such as are able to stand it out are not in the least affected. But Scotland is nearly exempt from the influence of grain speculations; we mean as applying to farmers. Manufacturers, mechanics, artisans and tradesmen generally, often feel, and feel severely, the effects of grain speculations, that is when the crop is less than an average one. If the quantity produced one year is less than

that produce for the previous years, the price is sure to advance in a ratio proportionate to the *decrease.* On the other hand, if the quantity produced in one year exceeds the average production of the previous years, almost to a certainty the price will fall in proportion to the *increase.* This affords the farmer the very best protection against a deficient crop; and enables him, under what might be called unpropitious circumstances, to meet his obligations.

But, how, it may be asked, does things operate so advantageously to the farmer. To such an enquiry an answer is easy. The farmer depends on a *home market* for the disposal of his produce; and those whose occupations are other than agricultural, depend on his produce for subsistence. It is important to observe here the benefits resulting from the manufacturer living in the same vicinity with the farmer. The manufacturer wants bread. The farmer wants of the articles of manufacture, and so the one can supply the other, to the mutual advantage of both. Living together, the exchange can be made without being subjected to cost of transportation. But remove them apart, and transportation becomes an item of some consideration in the exchange; and this the farmer, who is removed from the manufacturer must necessarily pay, consequently his bushel of wheat is not in reality so valuable, as his is, who lives adjacent to the manufacturer. The Scotch farmer is, in a great measure, exempt from the cost of transporting the raw material, as the consumer lives at his door. The manufacturer, the mechanic, the artisan &c., are part and parcel of the same community, consuming the production of agriculture, almost on the spot where they grow. There, you look in vain for imported boots and shoes; they are to be found only in the shoemaker's shop. Do you want a coat, the tailor is at hand to make it, no such thing as sending abroad your patronage to enrich others. Unlike the people of the west, who send to the east for large quantities of ready made clothing, there every necessary article is manufactured and made at home, and such only are imported as *cannot* there be made. This establishes a mutual dependence between the producer and manufacturer. The farmer looks with moral certainty to the latter, as a sure purchaser of his surplus produce, while the latter depends on the former for the necessaries of life in exchange for his articles of manufacture.

But not only does the manufacturer supply the home demand for manufactured articles, he also exports; and receives in exchange such articles as tea, coffee, sugar, wines, silks, &c., &c., and although the farmer must necessarily purchase of these articles, he is still no loser by the transaction, inasmuch as the exported articles of manufacture furnishes employment for a number of operatives, &c., depending principally on his produce for their daily bread, and who, but for this very cause, in all probability, would never consume a pound of it.

The reason, then, of land being so valuable in Scotland, obviously is, that the country is a manufacturing, as well as an agricultural one; because the inhabitants are adequate to consume all the productions of the soil. Did the farmer depend on a foreign market, glutted with the products of other countries, land in Scotland could not possibly be of more value than the land in those countries, the products of which

find a market at the same place. Under such circumstances, all the advantage one place could have over another, would be in its proximity to the market, and cost of transportation. If the country of A could transport its products to market at half the price of the country of B, the land of the former would possess a value over that of the latter, in proportion to its saving in transportation. Hence, the price of transportation increasing, as we remove from market, the price of agricultural products decreases; and so, also, does the value of land. If this theory is correct, and we do not think that it can be easily controverted, the best and only means of enhancing the value of land is to build up a home market for the products of agriculture. If Scotland was removed to the State of Illinois, with the population of the latter, following their present callings, thousands of acres, now paying a high yearly rent, would not be worth cultivating; the low price of produce would not pay for the amount of labor and manure necessary to produce a crop. But place the population of Scotland, with their present habits and pursuits, on the State of Illinois, and the result would be different. They would carry along with them a market for the productions of the earth; consequently they would increase in price, and the land increase in value. If the west would dispense with every article of eastern manufacture, &c., and use only such as are manufactured in the west, an increase in the value of the land would follow as a natural consequence. There is not a single article of manufacture, but partakes, more or less, of agriculture, as the manufacturer must live on the productions thereof. We cannot, therefore, purchase a single article of eastern manufacture, but we aid in building up the eastern farmer, just as effectually as if we were to buy his wheat, or any other of his farm products. If, when the western farmers dress themselves in a suit of eastern manufacture, they would reflect, that in buying such articles they were buying the wheat of the eastern farmer, when, in all probability, their own was lying unsold, they would surely feel mortified at their simplicity.

Respecting manufactures, the people of the west seem to labor under a strange infatuation. Why they are not more encouraged is incomprehensible. There is no need of sending east for manufactures; encourage the manufacturer, and he will come to you. Patronise him, and he will settle in your midst; he will manufacture at your doors; and render you entirely independent of the east. Hear what Captain Marryatt says on this subject: —

"The western States can produce every thing that the heart of man can desire, and can be wholly independent of them (that is the east.) They have, in the west, every variety of coal and mineral; a rich, alluvial soil, hardly to be exhausted by bad cultivation; and wonderful facilities of transport. Independent of the staple produce of cotton, they might supply the whole world with grain; sugar they already cultivate; the olive flourishes; wine is already produced on the banks of the Ohio, and the prospect of raising silk is beyond calculation. In a few days, the *manufactures of the old world* can find their way from the mouth of the Mississippi, by its thousand tributary streams, which run like veins through every portion of the country, to the confines of Arkansas and Missouri; to the head of navigation

at Saint Peters; on again to Wisconsin, Michigan, and to the northern lakes.

"One is really lost in admiration, when one surveys this great and glorious western country, and contemplates the splendor and riches to which it must ultimately arrive."

Captain Marryatt wrote for his countrymen, but it would be well for the people of the west to remember, and improve upon what he says. He rejoices over the "great and glorious western country," only because he thinks he sees in it a market for the manufactures of his own. But, may we not hope that the west will soon show the "Old World" that she is capable of manufacturing for herself; and thereby furnish employment for American, instead of British operatives.

The advantages of manufactures are most apparent, by comparing manufacturing with non-manufacturing countries. What is it that makes Massachusetts such a rich, flourishing, prosperous State? Her soil is of a quality far inferior to that in the west, yet she is one of the wealthiest States in the Union; and will continue to be, so long as her manufactures continue to prosper. So with England — what has advanced her to the eminent position she holds in the world, but her manufactures? She has no natural advantages that are not common to other countries; and in many of these she is behind the west; yet she is one of the most powerful nations on the globe, and boasts of being, in many respects, the "envy of the world." But deprive her of her manufacturing population, and she would soon sink into insignificance. Look at those countries devoid of manufactures, rich in soil, rich in mineral; rich in all of nature's gifts, yet, withal, poor, wretched, and miserable; hardly recognized among the nations of the earth.

A clergyman in Massachusetts, speaking of the emigration to California, is reported to have advised the people of that State to stay at home and attend to their business, and in that way they would secure more of the gold than by going to the mines. This is a very seasonable advice, and contains more truth than may, on a first observation, appear. While the gold diggings or washings continue profitable, every other branch of industry will be neglected; consequently, every thing consumed in the country will have to be imported; and doubtless the manufacturers of Massachusetts will swell the lists; and there, and such other places, the gold will eventually enter. Yes! the gold of California will build up Massachusetts; it will enable her to furnish employment for an additional number of mechanics, artisans, and operatives, and thereby enhance the value of her real estate, and her agricultural products; while the rich valleys of California will remain uncultivated. And what will Massachusetts have to thank but her manufactures?

But we have said enough. We sincerely hope that the people of the west will see the importance of encouraging manufactures. They are all that is required, to establish, permanently, west of the Alleghany mountains, the great metropolis of American wealth and power, and render the west independent of foreign manufactures. Neither

England, New England, nor any other country, has greater facilities. A super-abundance of materials is scattered all over the country, ready to lay your hands upon; inviting man to apply them to useful purposes, and promising a rich reward. All that is required, therefore, is a "long pull, a strong pull, and a pull all together." A united effort to establish manufactures, and the west will be second to no part of the globe.

ART. V.—ST. CHARLES COUNTY, MISSOURI

BY B. A. ALDERSON, OF MISSOURI.

MESSRS. EDITORS:—In these parts, we are pleased to see that you have again commenced the regular issuance of that most valuable (to the west) of all the journals now published;—many of the doubting, who had fears that it was to be numbered with the things that were—which have passed and gone forever—I am sure, will hereafter, have regular monthly greetings, mingled with much pleasure.

Feeling my inability to perform faithfully the task promised months ago, I began to think that a release was gained from that promise, but not so now; and the idea has occurred to me that a feeling of inability is often engendered, and a nonperformance of duties the result, from the fact that we do not at once take hold and manfully wrestle onward.

I have had some reflections on the subject of which I shall write, and, in connexion therewith, may transmit some relics of the past down to posterity, which, altogether, may not be wanting of interest.

In attempting to give some account of St. Charles county, and its resources, let us retire from the confines of the city, and wend our way along the hill road, which leads o'er hill and dale, through a dense forest of black-jacks, to the termination of the highlands, dividing the waters of the Mississippi from those of the Missouri river. At the end of two and a half miles, you suddenly emerge from this dark thicket, and find yourself standing upon the summit of a high eminence, and adjacent to others of a like nature, with nought to intercept the view so far as the eye can reach; east, west, and north is one vast amphitheatre, covered with green foliage and luxuriant grasses while under your feet, the soil you stand upon yields nothing—neither tree, shrub, nor herbage. These are the mamelles! projecting out boldly,

nearly midway between the two rivers. But from this eminence what presents itself to your view?—the ground floor of a great enclosure—one vast garden spot; its shores on the north washed by the great Father of Waters, and on the east, by those of his elder, but more turbulent brother, the Great Missouri. It is bedecked with the bright waters of the lakes Marias Tems Clair, and those of the Marias Croche; farm-houses, cultivated fields, and open prairie-lands, with here and there large clusters of stock of various kinds, feeding and wollowing on its luxuriant and succulent grasses. This is the Point Prairie!

Here, from this summit, you may have a rich feast for your eyes and imagination, from morning's early dawn, till evening's setting sun shall have thrown her soft, rich draperies o'er yonder lofty walls of rocks, which bound the Illinois shore, and woodland hills of St. Louis county, which surround and limit the view of this extensive and beautiful landscape.

Kind reader, be seated, and let us while away a few moments in communing on some of the principal features in the scene now before us; for when we meet again, I desire to descend from this height into those fertile fields you now behold in the distance, and search out, and hold up to public view, and to the emigrant's eye, the resources and facilities to be derived from a residence in the county of St. Charles.

Do you see that indentation in yonder cliffs of the Illinois shore? There rolls down the river by that name, bearing in its course the wealth of the lake region, and that bordering upon its own waters for many miles in extent, and thence deposits all upon the bosom of the river of rivers, to be distributed towards the four quarters of the globe.

One and a half miles below the mouth of this river, just behind that skirt of heavy timber which stands on this side the Mississippi river, is situated the town of Grafton, in Illinois, now bounding into life and action from the salutary influence consequent upon opening the canal through to Lake Michigan. This is about eleven miles north of St. Charles. Seven or eight miles still lower down the river, and which you may discern through the narrow skirt of timber bordering along the Marias Tems Clair, is the old French village of Portage de Sioux. This village derives its name from the fact that during Indian times in this country, the Sioux, and other tribes, in the fall of the year, when going to their hunting grounds westward, would land their canoes at this point, and haul them across to the Missouri river, a distance of about two miles, thereby saving a voyage of some twenty-five miles, and continue their voyage up this stream, stopping at St. Charles to lay in a stock of amunition, and on their return in the spring to barter off their cargo of skins, tallow, &c. Their canoes, mostly of light birch bark, were made fast to the tails of their ponies, and thus hauled from river to river.

About sixteen miles distant, and only obstructed from our view by the intervening forest, stands the flourishing city of Alton. It is situated immediately at the termination of those ledges of rock which you see fading away in the distance.

See yonder bluff, on the St. Louis side of the Missouri river, jutting up boldly to the water's edge, with a dark curve line encircling its base. Those are the coal banks of Chaboniev; and immediately in our rear, underlaying these broken highlands, is one continuous coal-field, continuing, perhaps, the whole length of the county; several pits having been opened and worked round about the city, promising fair profits for the labor of the miner.

Let us look back for a few moments, from those well tilled farms, and herds of stock which our eyes now behold in the plains beneath us, fifty years or less, to the time when the Spaniard held dominion, and see what a change Americans have wrought! The village of St. Charles, with the cattle belonging to its inhabitants, was enclosed by a fence, joining on to the river above and below, while the tillers of the soil raised their crops outside this fence, where no cattle could molest. As the stock increased, to afford pasturage, the area around the village was enlarged, commencing one and a half miles down the river, and crossing these highlands a few rods back of where we now stand, and extending in a westerly direction, entered the open prairie and extended some forty arpens in length, beyond which the cattle never ranged, the cultivated lands being outside this enclosure, principally on the banks of the Marias Croche, whose placid waters you there see, in the shape of a crescent. These fences were constructed of trees, poles, and rails, and built and kept in repair by those who, in common, cultivated the lands beyond them, each one making and keeping in repair a distance in proportion to the number of arpens he had in cultivation. On the principal roads leading to the village, gates were erected, and old men appointed to keep them and gather toll, which consisted of one bushel of wheat per season from each farmer; and as each cartload of corn passed, when gathering the crop, a few ears were thrown out to his children, which they gathered up and stored away, affording an ample living for his family. In those days, spring wheat only was raised, and the corn crop was housed by the fisrt of November, at which time the gates were thrown open, and so remained until the first day of March, when they were again closed. Finally, through the medium of tradition, handed down by the old French settlers, we are informed that those were good old times—no bad people—all social, and worked in common. But the Americans began to come in—would throw down the fence—leave the gates open—and now, you see, the result is that every man has to himself his own field, and lives and flourishes beside his own "vine" and fruit trees, and the French village of St. Charles has grown to be a flourishing American city.

ART. VI.—PACIFIC RAILWAY EAST OF THE MISSISSIPPI.

The following communication has been called forth, as we infer, by the invitation of the committee of publication but was not received in time to be published under their direction. We have therefore given it a place in the present number of our journal. This document comes from an important point in the valley of the Mississippi, and may be regarded as an exponent of the views entertained in that region in respect to the Pacific railway. It also contains some interesting information in regard to the progress of railway improvements east of the Mississippi.

[FOR THE WESTERN JOURNAL.]

INDIANAPOLIS, IND., 15th Sept. 1849.

I avail myself of your kind invitation, to submit, through your columns, a few facts and suggestions, relative to the Atlantic and Pacific rail road, now in contemplation, with special reference to the line best calculated to answer the anticipated purposes of that great national enterprise.

It is now universally conceded that such a work will be indispensable to the east, middle and western sections of the Union, and not a doubt can be entertained but that, sooner or later, the work will be accomplished, however gigantic it may appear.

But, while all concur in the importance of the work, all do not agree as to the line or route of such a road; some contend for the southern route, through Georgia, Alabama, Tennessee, and Arkansas; while Mr. Whitney and his friends are pressing the claims of the northern route, commencing at the northern lakes. These routes, of course, have their advocates, but it seems to me that a single glance at the map, with a very slight knowledge of the character of the country, should satisfy any one that both the routes referred to are out of the line of such a work, and that the true line is between the two, or a central route. This route I propose very briefly to lay down for the eye of your readers, in tracing the map. The great object of such a line of rail-way, is, to connect, by the shortest practicable route, at the least possible expense, the extremes of the Union, or, in other words, our Atlantic sea-board with the Pacific, provided such connection shall pass through the largest portion of population, and accommodate the greatest number in its business facilities. Such a route, I maintain, is presented in a pre-eminent degree, by the middle, or central line. That line must make St. Louis the starting point, *west*, however it may branch

through the valley of the Mississippi, in its eastern direction. Upon this point, I think the whole of the centre will concur. I do not, therefore, stop to examine that question, or to show upon what my opinion is founded. I proceed to present the line from St. Louis east; to connect that city, by rail-way, with the cities of the Atlantic, which I maintain is to be the great line, whatever branches it may and will have; and as I like plain writing, so that I may be distinctly understood, I will name the points and lines, with their connections, for it is evident that any lines which have several points of termination on the Atlantic, as at Boston, New York, Philadelphia, and Baltimore, the direct central line should pass from Saint Louis east by Vandalia, Terre Haute, Indianapolis, Muncie, Winchester, and Sidney, to Bellefontaine, in Ohio, from which point the Philadelphia line would pass through Marion, Mansfield, Wooster, Massillon, Canton, and Beaver, to Pittsburgh, and from thence to Philadelphia. This whole line, from the western line of Indiana to Philadelphia, is chartered, and in a rapid progress of construction. At Bellefontaine, Ohio, the line from Sandusky city, already constructed, will intersect the line near Mansfield, Ohio; the Cleveland line will intersect it, and, at the Indiana State line, the Wheeling line through Columbus, Urbana, Piqua, and Greenfield, will intersect it. These lines will concentrate at the State line of Indiana, the branch lines from Boston, New York, Philadelphia, and Baltimore, forming the junction, and running, by a single road, through Indiana and Illinois, by the direct route. This route will be found to be one hundred miles nearer than the Chicago route, and about the same nearer than the Cincinnati route, by Vincennes. It is greatly the cheapest of construction, as it passes upon the dividing line between the waters of the lake and the Ohio river. It will be the great business route, as it will have no competition from natural avenues of trade; and from one end to the other, it will pass through one of the best countries in the world.

I have said enough to draw the attention of your readers to the route. It is, through Pennsylvania, Ohio, and Indiana, in a rapid state of construction, in a continuous line, and it only remains for Illinois to grant the right of way, to secure the construction through that State to St. Louis, when it must become the great thoroughfare of business and travel between the cities named and those intermediate, and the intersection of the Atlantic and Pacific rail road at St. Louis.

I may pursue the subject hereafter, if desirable. I trust, however, I have said enough to call public attention to the great central route.

S.

ART. VII.—THE OSAGE VALLEY.

IMPROVEMENT OF THE OSAGE RIVER.

There is not, in our opinion, a more interesting district of country west of the Mississippi than that drained by the Osage river: but owing to the operation of a variety of causes the settlement of this valley has not kept pace with other parts of the west that are far less favored by nature. The uncertainty of the navigation of the Osage has prevented the staple growing emigrants from settling in its valley, and consequently it has been left open to the smaller farmers who not having much produce to ship have apparently taken but little interest in the improvement of the river. Recently however the people of this region have become awakened to the importance of improving the means of sending their surplus produce to market, and acting under a charter granted in February 1847 to an association of counties, the work of improving the navigation of the Osage was commenced in the summer of 1848, and during that season we learn that the sum of about $18,570 was expended and we have been informed by one of the commissioners that he is confident, from personal observation, that the work can be completed with an expenditure of $25,000 from the mouth of the river to Pappinville the county seat of Bates county, a distance of about 300 miles.* In a communication from the gentlemen above alluded to he says "there is but little work required except in the shoals, and in cutting the hanging timber from the shore. The mode of improving is by wing dams, composed of brush and rock: and dredging or scraping out the gravel on the shoals and removing the logs from the channel. The Osage is a beautiful stream of clear water with rock or gravel bottom, is quite deep in the pools or spaces between the shoals which are from one to three miles apart: the river is about 200 yards wide. The work done last year has been of great advantage to the navigation and I have no doubt that the river can be made navigable for small boats two thirds of the year with comparatively small expense, to the town of Warsaw. The dams constructed last year have every appearance of remaining permanent. They have had the effect of deepening the channel wherever they have been constructed, and owing to the gentle current of the river these channels are likely to remain permanent, where they have been formed by the improvement. The Osage drains a scope of country comprising some eighteen or twenty counties of fertile land, and is rapidly populating with wealthy farmers. The valley of the Osage and its tribu-

*We learn that owing to the continued high water in the river during the present year the work has been suspended.

taries cannot be excelled in point of soil, spring water, and timber, and is destined ere long to become the most popular portion of the state. It abounds with iron, stone coal, and lead. With in a few miles of this place (Tuscumbia,) an individual has recently sunk a shaft about ten feet in solid iron ore which he struck near the surface. Many other discoveries of iron have been made in this neighborhood, in locations abounding with timber."

Now all this is true, and it is natural that our correspondent should conclude that the valley of the Osage will "ere long become the most popular portion of the state" but there are other causes besides the want of navigation that must prevent the valley of the Osage, in common with other central portions of the west, from improving, or becoming popular in the estimation of emigrants.

The agricultural emigrants from all the Atlantic states are attracted by staple producing districts. Those south of Pennsylvania incline south for the purpose of growing cotton, while those north of Mason & Dixon's line incline northward with a view to wheat growing; and this inclination of the American agriculturists to emigrate to staple growing districts is strengthened by the prejudices which are continually kept alive between the north and the south, by the fanatics of the one, and the demagogues of the other. Hence as our population progresses westward, the current of emigration diverges farther and farther from the central region, leaving this in many respects the most favored portion of the continent, to the occupation of the early settlers, a large portion of whom came in pursuit of game and natural pasturage, and are consequently slow in adopting the improvements of the age. This tendency to diverge from the central region may be observed within a short distance below the falls of the Ohio, and as we proceed thence westward, this neglected region gradually widens, embracing a considerable portion of western Kentucky, and the southern part of Illinois, and crossing the Mississippi, it embraces the larger portions of Missouri and Arkansas.

An intelligent foreigner with a map of the United States before him, and acquainted with the geology as well as the geography of this region, would unhesitatingly pronounce it the most desirable part of the continent. Such an individual could scarcely comprehend why it is that, while other portions of this great valley, both north and south have been, and are still filling up so rapidly, that yet here in the centre the population is nearly stationary. Almost every intelligent individual acquainted with the map of the United States, regards the mouth of the Ohio as the best location in the interior of the continent for a great commercial emporium, and it is generally believed that nothing but its being subject to occasional inundation has prevented the building of a great city at that point; but in our opinion, this has been prevented by other causes more potent than the overflowing of the waters; and we are persuaded that if nature had formed a bluff at the mouth of the Ohio, as high and as beautiful as that at Memphis, that Cairo would not have been up to the present day as large a town as Natchez. Yet we do not deny that the time may come when Cairo may be a large city. We have been lead into a digression that we did

not foresee when we commenced this article: and we beg pardon of our Osage friends for rambling so far from their beautiful valley. In conclusion, we feel fully warranted in expressing the opinion that, in view of the improvement of the navigation of the Osage river, there is no part of the State that offers more inducements to the emigrant than that watered by this beautiful stream and its tributaries.

ART. VIII.—THE VINEYARDS OF HERMANN, MO.

The first printed notice we ever met with in respect to the cultivation of grapes at Hermann, appeared in the Annual Report of the St. Louis Horticultural Society, in January, of the present year. So quietly has this new settlement proceeded with its enterprise, and so little interest do the people of Missouri take in matters connected with the development of the resources of the State, that we question if one in a hundred of our own citizens is at this day, aware of the fact, that wine has ever been produced at Hermann, although some of the vineyards are in full view from the steamboats, which daily pass the romantic bluffs on which the vines are growing.

Gasconade, the county in which Hermann is located, is considered among the poorest counties in the State, and consequently, is but sparsely settled; but we confidently predict, that the statistical returns for the year 1860 will show that the wine crop of a few townships in this poor county, produced by a comparatively small number of German families, will be of greater value, in money, than the entire hemp crop of the State. Indeed, we shall not be surprised, if the vintage of Hermann, in 1855, exceeds in value all the hemp grown in Missouri, in the same year.

The facts contained in the following communication from M. Poeschel, in answer to our inquiries in respect to grape-growing at Hermann, may be relied on as strictly true; and it is wonderful that so many of our citizens subject themselves to the privations and hardships incident to a trip to California, in search of gold, when it can be so easily obtained by dressing the vine, and pressing the delicious fluid from rich clusters of grapes, amidst the pleasant hills and vallies of southern Missouri. No employment can be more pleasing to one of refined taste, than the culture of the vine; and we verily believe that no rural pursuit in this, or any other country, will pay one-half the profit that can be realized by grape-growing in Missouri for the next twenty years.

We indulge in no careless or enthusiastic expressions. We have well considered the import of all we have said on this subject, and now beg to refer our readers to the facts contained in Mr. Poeschel's communication:

Hermann, Mo. May 31*st*, 1849.

MESSRS. TARVER & RISK,
ST. LOUIS, MO.

GENTLEMEN,—A few weeks ago I received your favor of 20th April, and I will cheerfully give you now the desired information regarding the culture of the grape-vine in this part of the country, as far as this is in my power.

The first attempts at vineyards were made here about eight years ago, by people from the Rhine, but they adhering to their old prejudices, did not succeed well. Other settlers finding out where the error lay, tried it on another scale, and succeeded much better, treating their vines more after the Cincinnati manner, and their success encouraged many. In 1845 about 50,000 vines were planted; 1846, more than 150,000; in 1847, more than 300,000; in 1848, more than 500,000, and now there are at least 700,000 vines in full thrift.

Three years ago I commenced my little plantation, planting about 1000 rootlings, (yearlings,) on 7-8 of an acre, raised them all on Espaliers, and they grew wonderfully, 6 × 8 feet apart, but the soil was well prepared for them, as I had dug furrows 2 feet deep and 2 feet wide, throwing the fertile soil underneath, and covering the surface all over with the yellow clay, which admits no weeds. In 1847, I earned from my little vineyard nearly $700 in grapes, and $400 from wood. In 1848 I made wine to the amount of 1600 dollars, 400 dollars of wood, (slips and yearlings.) I have planted my vines 6 × 8, but now I shall plant them 8 × 8, finding them too much crowded; the vine will bear more freely and have more perfect grapes if air is admitted. The southern exposure, and south-east are here preferred to all others.

The mode of pressing is very simple. I wash my grapes, let them stand after washed *before* pressed 24 hours, press them in my wooden press; when pressed let the juice run into suitable casks, let it then stand quietly uutil the fermentation is over, a cool place for that of course is the best,—cover the bung-hole with a wet rag,—after the fermentation is over, (9 or 10 days,) fill it over softly in well prepared casks, let it stand slightly closed (until a sort of second fermentation is over) for about three days, and then shut it tight till February or March, when the young wine is drinkable. Have you love for your wine, let it lay undisturbed till April, then bottle it.

I am from the northern part of Germany, therefore had no knowledge of the culture of the grape before I came to Hermann; the settlers of this section of the country, are from all parts of Germany. Foreign wines will not do here, they freeze in winter, and dry up in summer. The olny grape that will make good wine here (as far as

our experience tells us,) is the Catawba. Wine from this variety surpasses the best Hock in flavor and strength, and has no acid. The Catawba wine weighs 10 ° whereas the best Hock ever imported did not come up to 8 1-2 °. Our wine was readily sold at $2,00 per gallon in St. Louis and elsewhere this spring, and I think the world will be our market after a while, though not at the same prices; but we will strive to diminish importation. The grape has never failed here, as long as this settlement exists. I cut my vines in the month of November, and plant early in spring. The rot among the grapes, which you allude to, is very trifling and imperceptible among the abundance of grapes which remain. Our prospects for this year are greater than ever they have been before.

Cheerfully would I and my neighbors subscribe for your periodical, but we don't understand the English language.

I am most respectfully your obedient servant,

MICHAEL POESCHEL.

COMMERCIAL STATISTICS.

It will be perceived that we have selected our commercial statistics for the present number with reference to the subject of a railway to the Pacific. It is natural, at a time when so much is said of our commerce with the east, that men should inquire into its details; and hence, we have undertaken the labor of separating that part of our commerce which passes the Cape of Good Hope and Cape Horn, from that which is carried on with other countries. The following tables have been carefully made up from the report of the Secretary of the Treasury, made to the last session of Congress.

It will be seen that our imports from all countries beyond the capes, amounted, for the year ending 30th June, 1848, to $13,499,455, and that our exports, in the same period, amounted to only $5,133,456, including bullion and specie, leaving a balance against us in the barter and specie account, of $7,628,020. This balance was adjusted, of course, with foreign bills, principally on Great Britain. Now, if by shortening the route, and cheapening transportation to the east, we can discharge these annual balances by an exchange of our own products, what effect will this produce upon the commerce of Great Britain, and especially upon the commerce between that nation and the United States? This is an important inquiry; and we should be pleased if some of our political economists would favor us with an answer. For ourselves, we are not prepared to hazard an opinion; but it would seem that if our exports to China and other eastern countries should balance our imports, that this would have a tendency to diminish our exports to Great Britain.

Tables showing the nature and extent of the trade between the United States and China, and between the United States and other countries beyond the Cape of Good Hope, made up from the report of the Secretary of the Treasury.

Statement of Domestic Exports from the United States to China, for the year ending 30*th June*, 1848:

	VALUE.
Apples,	$100
Beef in barrels,	8,377
Beer, porter, and cider,	130
Books and maps,	5,348
Brushes,	234
Biscuit and shop bread,	12,387
Butter and cheese,	4,035
Candles, spermaceti,	8,290
Clothing, wearing apparel,	1,452
Copper and brass manufactured,	306
Cotton,	850
Cotton, piecegood, printed, and colored,	423
White,	1,639,551
Twist, yarn, and other thread,	45,480
All others,	6,505
Earthen and stone ware,	300
Fish, pickled,	186
Flax, manufacture of	24
Flour,	31,640
Furniture, household,	1,367
Ginsing,	162,647
Glass,	1,127
Ice,	2,541
Indian corn meal,	40
Iron castings,	368
Iron and steel manufactured,	7,049
Lead,	55,997
Leather, boots, and shoes,	1,444
Lumber,	1,000
Masts and spars,	3,330
Medicinal drugs,	1,090
Molasses,	68
Nails,	110
Oil, spermaceti,	194
Oil, linseed, and spirits of turpentine,	711
Paints and varnish,	1,204
Paper and stationery,	831
Pork, hams, and bacon,	11,507
Printing presses and type,	396
Saddlery,	157
Skins and furs,	5,300
Spirits from grain,	3,829
" " molasses,	2,590

Sugar, refined,	1,161
Tallow, candles, and soap,	1,336
Tar, pitch, rosin, and turpentine,	642
Tin, manufactured,	726
Tobacco, manufactured,	2,921
Vinegar,	35
Wood, boards, plank, and scantling,	6,145
Wood, manufactures of	6,191
All other articles not enumerated,	13,954
Total,	$2,063,625

STATEMENT OF EXPORTS *of Merchandize, of foreign production, from the United States to China, for the year ending* 30*th June*, 1848.

	Value.
Gold, Specie,	$6,222
Silver "	65,791
Tea,	346
Worsted Stuff Goods,	450
Silk Piece Goods,	4,500
Camlets of Goats and Mohair,	1,444
Socket Chisels,	75
Articles not specified,	1,265
Glass, Silvered and in frames,	1,001
Wines in casks — Madeira	1,041
" " Sherry and Saint Lucas,	1,078
" " White,	181
" port in bottles,	40
" claret in bottles,	250
Brandy,	2,116
Oil, Linseed,	873
Cocoa,	381
Raisins,	4,177
Opium,	500
Cigars,	1,123
Cordage, untarred,	6,072
Merchandize not enumerated,	27,015
Total,	$126,388

Recapitulalion of Exports to China.

Total Exports, of Domestic growth and manufacture,	$2,063,625
Total of Exports of Foreign Merchandize,	126,388
	$2,190,013

STATEMENT OF IMPORTS *into the United States from China for the year ending the 30th June*, 1848.

	VALUE.
Books,	$115
Buttons,	3,065
Cabinet and household furniture,	888
Camphor, crude,	11,920
Cassia,	79,585
China, porcelain, earthen and stone ware,	9,685
Cigars,	2,183
Clothing, articles of ware,	10,377
Copper, manufactures of,	17
Copper plate printing and drawing,	273
Cordials,	2
Cotton printed, stained, &c.,	5,813
Domestic produce brought back,	8,060
Dye wood in stick,	1,236
Fur,	12
Ginger root,	11,687
Gold and silver manufactures not specified,	38
Grass cloth,	4,221
Hides, raw,	1,316
Indigo,	9,717
Iron, Manufactures of,	78
Japanned ware,	22,038
Jute sisal grass, coir, &c.,	36,590
Matting of flaggs,	62,141
Needles,	339
Nutmegs,	49
Painting and statuary,	22
Paper, writing,	1,413
Paper, not specified,	1,204
Paper hangings,	1,596
Personal effects of persons dying abroad,	575
Silk, piece goods,	970,971
Silk, sewing,	1,602
Silk, tamboured or embroidered,	312,953
Silk manufactures not specified,	7,435
Silk Floss and raw,	93,287
Silk Umbrellas,	31
Silver plated metal,	328
Specimens of Natural History,	146
Sugar, brown,	20,920
Tea, lbs. 23,597,702,	6,217 111
Tin in pigs and bars,	58,605

Ware, painted or gilt,	518
Wine, red,	59
Wine, port,	37
Wood, cedar, mahogany, rose, scented — manufactures of,	138
Other manufactures of wood,	130
Worsted stuff goods,	1,882
Value of merchandize not enumerated in the foregoing statement,	108,610
Total,	$8,083,496

Excess of imports over the amount of exports, - - $5,893,483

Of the above amount of imports, $1,857,582 paid an advalorem duty, the balance was free of duty.

A Statement, showimg the value of Exports of the Produce and Manufactures of the United States to all countries beyond the Cape of Good Hope and Cape Horn, for the year ending the 30th June, 1848.

China,	$2,063,625
Dutch East Indies,	133,905
Mannilla and Philippine islands,	36,945
British East Indies,	510,284
Asia, generally,	266,452
South sea and Pacific,	305,118
Chili,	1,703,625
Peru,	123,502
	$5,133,456

Amount of Foreign Merchandize Exported from the United States to all countries beyond the Cape of Good Hope and Cape Horn, for the year ending the 30th June, 1848.

China,	$126,388
Dutch East Indies,	107,954
British East Indies,	156,217
Mannilla and Philippine islands,	13,549
Asia, generally,	28,279
South sea and Pacific ocean,	67,483
Chili,	220,886
Peru,	16,731
	$737,979
Amount of Domestic Exports,	$5,133,456
Total of Exports beyond Cape Horn,	$5,871,435

Value of Merchandize imported from all countries, from beyond the Cape of Good Hope and Cape Horn, for the year ending the 30th June, 1848.

China,	$8,083,372
Dutch East Indies,	249,346
British East Indies,	2,069,632
Mannilla and Philippine islands,	1,197,027
Asia, generally,	255,400
South sea and Pacific ocean,	9,960
Sandwich islands,	6,508
Chili,	1,31 0,451
Peru,	317,759
Total of imports from all countries beyond the capes,	$13,499.455
Excess of imports over the exports,	$1,628,020

STATISTICAL REVIEW OF THE AMERICAN WHALE FISHERY.

We extract from the *Merchants' Magazine* for February, 1849, the following statistical review of the American whale fishery. The article purports to have been written by Henry P. Haven, of Connecticut.

We publish it in connexion with the statistics of our eastern commerce, for the purpose of presenting, as far as practicable, the whole of our trade with that part of the globe, at one view.

The whaling fleet of the United States consisted, on the 1st of January, 1849, of 580 ships and barks, 20 brigs, and 13 schooners, with a total tonnage of 195,598 tons, owned in the following places:

	Ships & barks.	Brigs.	Schooners.	Whole No. of vessels.	Tons.
New Bedford	246	2	1	249	80,660
Nantucket	67	1	1	69	23,477
New London	48	1	4	53	17,880
Fairhaven	49	-	-	49	15,805
Sag Harbor	41	-	-	41	14,649
Warren, R.	20	-	-	20	6,558
Stonington	21	-	-	21	6,414
Mystic	15	-	1	16	4,897
Cold Spring	8	-	-	8	3,315
Greenport	10	-	-	10	3,059
Westport	10	5	-	15	2,804
Edgarton	6	2	-	8	2,408
Newport	6	-	-	6	1,984
Mattapoisett	6	4	-	10	1,880
Fall River	5	-	-	5	1,615
Providence	4	-	-	4	1,459
Provincetown	1	3	6	10	1,200
Falmouth	3	-	-	3	1,106

Holmes' Hole . . .	3	-	-	3	949
Lynn	2	-	-	2	720
Bridgeport	2	-	-	2	709
Salem	1	-	-	1	398
Wareham	1	-	-	1	374
Sippican	1	-	-	1	256
New Suffolk . . .	1	-	-	1	227
Bristol	1	-	-	1	222
Plymouth	1	-	-	1	175
Somerset	1	-	-	1	137
Dartmouth	-	1	-	1	111
Yarmouth	-	1	-	1	90
Total	580	20	13	613	195,598

Average tonnage . . . . . tons 319

The ship *Hope*, of New Bedford, sailed in 1843, last reported ashore at New Zealand, is not included in this list.

The largest vessel in this fleet is the ship *South America*, of Providence, 616 tons; and the smallest, the schooner *Atlas*, of New London, 81 tons.

The time of sailing of these vessels is as follows:—

	Ships & Barks.	Brigs.	Schooners.	Total.
Sailed in 1844	11	...	.	11
" 1845	81	...	1	82
" 1846	121	1	1	123
" 1847	165	2	3	170
" 1848	159	10	3	172
In port	43	7	5	55
Total.	580	20	13	613

The vessel now at sea out the greatest length of time is the ship Barclay, of New Bedford, sailed 20th July, 1844.

The ship Alexander, of Sag Harbor, arrived 19th July, 1848, about four years, ten months and four days, perhaps the longest voyage ever made by an American ship.

Of the whole number of vessels at sea (558,) about one-half are engaged chiefly in the sperm whale fishery, the other half making the right whale the main object of their pursuit; the vessels of larger tonnage being generally right whalers, and the smaller, including the brigs and schooners, in the sperm fishery.

About 35 brigs, schooners, and small barks are employed in the sperm whale fishery in the North and South Atlantic; about 85 ships and barks in the South Atlantic and Indian Ocean for sperm and right whales; and most of the remainder in the Pacific—those for right whales cruising on the coasts of Asia and America from 1st March to 1st October each year in latitude 35° to 60° N.; the sperm whalers cruising on the line, and coasts of Peru, Japan, and New Zealand during the whole year.

The following table shows the number of vessels employed in the American whale fishery at the different dates during the last twenty years:—

	Ships & Barks.	Brigs.	Schooners.	Total.
January 1, 1829, ...	184	17	2	203
" 1834, ...	414	7	...	.....
" 1843, ...	589	55	14	658
" 1846, ...	680	34	22	736
" 1849, ...	680	20	13	613

It will be seen from this table, that while the increase has been very great since 1st January, 1829, yet the last three years have shown a *decrease* of 123 vessels, or 17 per cent, being a greater reduction than the increase of the three previous years. From the tables at the close of this article, it will be seen that the ships arriving with whale oil in the years 1843, 1844, and 1845 were absent but little more than two years, and averaged 2,058 barrels whale oil, with an average price of 34 1-2 cents; while the right whale ships arriving in 1846, 1847, and 1848 were absent an average of thirty-one months, and obtained only 2,066 barrels of whale oil, with an average price of 33 cents—an addition of one-fourth to the time, with no increase of quantity and with lower prices.

The laws of *profit* and *loss*, which invariably govern all trade, have caused this great reduction in the whaling fleet; and unless the price of whale oil should materially advance, or new and undisturbed *grounds* (as the waters frequented by whales are technically called) be found, which it seems can hardly be hoped for, all oceans, seas, and bays having been visited, the number of vessels in this branch of the whaling business will probably continue to decrease. Those well qualified by experience and observation to judge, believe that all the vessels employed in the right whale fishery the past three years have not, in the aggregate, paid to their owners 6 per cent interest, without regard to profit, which, from the great length of time, hazard, and risk, ought certainly to be looked for.

The diminution in the whaling fleet here spoken of has fallen on those vessels engaged in the capture of the right whale, the prices obtained for sperm oil affording fairer remuneration for the additional time now required for a voyage. The right whale ships formerly procured their cargoes entirely in the South Atlantic Ocean, on the coast of Brazil, where the first vessels were sent about 1774, and were absent from nine to twelve months. The whole amount of whale oil then taken was very small. In the year 1826, the whole number of vessels sailed from the United States for this fishery was 23, viz:—New Bedford, 13 ships; Sag Harbor, 6; New London, 2; Vineyard, 1; New York, 1; and the whole import of whale oil in 1828, twenty years since, was but 46,065 barrels, whalebone 417,966 pounds—whale oil being worth about 26 cents, and bone 37 1-2 cents.

About the years 1829 and 1830 the right whalers began to extend their cruises eastward, and found abundance of whales in the vicinity of the Island of Tristan d'Acunha. Having never been disturbed, the whales here were tame and easily taken; and many ships returned from this ground in 1831 and 1832, absent from seven to nine months, with full fares, and the old cruises on the Brazil banks were abandoned. As the whales grew shy and were killed off in the South Atlan-

tic, the ships worked east of the Cape of Good Hope, in the Indian Ocean, off the South Coast of New Holland, and finally at New Zealand, around which last island was the favorite cruising ground for right whalers from 1835 to 1840. Here, too, the untiring energy of the whalemen frightened and dispersed the fish which his skilful hands failed to capture, and new and undisturbed fields were to be sought out. About this time right whales of a large size were found in the North Pacific Ocean, and in the year 1839 the ships Elbe and Beaver, of Poughkeepsie and Hudson, took 2,800 barrels of whale oil off the north-west coast of America. Gradually, as the ships resorted to this ground, they cruised west towards the coast of Kamtschatka, and found whales very abundant in the seas on the coast of Asia.

The following table shows the amount of whale oil taken in north latitude in the Pacific Ocean:

Years.	Ships.	Av. bbls.	Bbls.	Years.	Ships.	Av. bbls.	Bbls.
1839, ...	2	1,400	2,800	1841, ...	170	1,528	259,470
1840, ...	3	587	1,760	1845, ...	263	953	250,600
1841, ...	20	1,412	28,200	1846, ...	292	869	253,800
1842, ...	29	1,627	47,200	1847, ...	177	1,055	186,660
1843, ...	108	1,349	146,800	1848, ...	150	(Estimated.)	

Reports at this date (January 10) have been received from only 8 ships which had left the coast in 1848, and they had only taken an average of 704 barrels.

In the year 1846, an adventure was started from New London for the capture of the right whale, in Davis' Straits, where the English have whaled for two hundred years, but which had heretofore remained undisturbed by Yankee skill and daring since the revolution; and it was argued, that as the Americans had driven the English from the South Sea fishery, they might successfully compete with them among the icebergs of the north.

The first fitting and preparation of a vessel for the ice whaling, is attended with much expense not required for any other voyage. The bottom of the ship must be double covered with oak plank, and her bows very strongly fortified, without and within, to enable her to force her way through the ice and resist its pressure. The ship McLellan was purchased, fitted, and sailed for Davis' Straits April 8th, 1846; since which time she has made three voyages, averaging six months and twenty days, with an average cargo of six hundred and twelve barrels whale oil. The success of this ship has not been sufficient, as yet, to warrant the sending of any additional vessels to the ice; but the McLellan is fitting for another voyage thither.

The inhabitants of the island of Nantucket were the first persons to engage extensively in the whale fishery, and as early as the year 1690, they made whaling a profitable business, discovering the whale from a look-out on shore, capturing him in boats, returning to the shore with the carcass, to extract the oil from the blubber. As the whales grew scarce around the island, they pushed off into the ocean in small vessels, and in the year 1748 they had 60 sail, from 50 to 75 tons, and caught 11,250 barrels of oil. The first sperm whale caught at Nantucket, and probably by Americans, was taken by the schooner Hussey about the year 1712.

The ship Beaver, of 240 tons, sailed from Nantucket in the year

1791 for the coast of Peru, and was the first American whaling vessel which doubled Cape Horn. She cost $10,200, fitted for sea; was absent 17 months, and brought home 1,000 barrels sperm oil, and 250 barrels whale oil.

IMPORTED AT NANTUCKET IN

Years.	Sperm Oil. *Bbls.*	Whale Oil. *Bbls.*	Years.	Sperm Oil. *Bbls.*	Whale Oil. *Bbls.*
1808	7,707	10,503	1828	43,174	1,033
1818	14,864	13,426	1848	22,362	7,409

Although the enterprising inhabitants of Nantucket were the first to engage extensively in the whale fishery, yet they have not greatly increased their number of vessels in thirty years; and while New Bedford and other places have added a large number of ships, the good people of the island seem to have been satisfied to hold on the even tenor of their way.

	Ships & Barks.	Brigs.	Schooners.
Nantucket owned, January 1, 1819,	57	1	.
" " 1829,	60	1	.
" " 1849,	67	1	1

Showing an increase in twenty years, of only seven ships and one schooner.

New Bedford, which stood but little ahead of Nantucket twenty years ago, has made very large additions, and now owns nearly half the whaling tonnage of the United States.

	Ships & Barks.	Brigs.	Schooners.
New Bedford owned, January 1, 1829,	67	8	1
" " " 1849,	246	2	1

The following table shows the import of sperm oil into the United States, with the average price, for the last thirty-four years, since 1815: —

		Bbls.			Bbls.
1815	$1 40	2,186	1832	$0 85	71,435
1816	1 12	7,343	1833	0 85	90,000
1817	0 72	31,603	1834	0 72	121,700
1818	0 90	17,102	1835	0 84	172,682
1819	0 83	22,716	1836	0 89	128,685
1820	0 92	32,127	1837	0 82	181,724
1821	0 68	43,365	1838	0 86	125,977
1822	0 65	42,839	1839	1 05	142,483
1823	0 42	86,725	1840	1 03	158,431
1824	0 45	92,475	1841	0 94	157,413
1825	0 71	60,052	1842	0 73	165,637
1826	0 75	33,000	1843	0 63	166,985
1827	0 73	92,865	1844	0 90	139,481
1828	0 62	73,000	1845	0 88	157,603
1829	0 61	80,000	1846	0 88	95,219
1830	0 66	106,291	1847	1 01	120,753
1831	0 71	106,436	1848	1 00	107,876

Largest import in twenty years in 1837, 181,724 barrels; highest price in 1839, $1 05.

A table showing the import of whale oil since 1828, and the average price since 1840: —

		Bbls.			Bbls.
1828	——	46,065	1839	——	227,816
1829	——	64,039	1840	$0 30½	208,688
1830	——	86,294	1841	0 31¾	205,019
1831	——	113,948	1842	0 33¾	161,041
1832	——	170,244	1843	0 34½	206,727
1833	——	159,166	1844	0 36½	261,245
1834	——	122,292	1845	0 32¾	272,186
1835	——	125,100	1846	0 33	207,481
1836	$0 36	131,157	1847	0 36	313,150
1837	0 33	219,138	1836	0 33	280,656
1838	0 32	225,000			

Largest import in 1847.

IMPORT OF WHALEBONE, SINCE 1844.

1844	lbs. 2,532,000	1847	lbs. 3,341,000
1845	3,167,000	1848	2,023,000
1846	2,276,000		

It is believed that no accurate record was kept of the import of whalebone for many years previous to 1844, but it is safe to estimate that a right whale will yield at least 800 pounds of bone to 100 barrels of oil. The price of this article has fluctuated from 9 cents in 1821 and 1822, to 55 and 60 cents in 1844.

The following statistical tables, showing the average time and success of the whaling vessels for the past seven years, are arranged from the New Bedford *Shipping List:*

SPERM WHALERS.

SHIPS AND BARKS FROM THE PACIFIC AND INDIAN OCEANS.

Years.	Ships arrived.	Av. time absent. *Months.*	*Days.*	Sperm Oil. *Bbls.*	Whale Oil. *Bbls.*
1842	55	41	8	1,973	135
1843	70	41	13	1,641	124
1844	69	43	...	1,419	293
1845	91	43	21	1,291	387
1846	42	41	6	1,350	280
1847	52	45	12	1,505	219
1848	52	41	19	1,202	192

It will be seen from this table that while the time of the ships arriving the past year was about the same as in 1843, five years since, yet the quantity of oil was diminished nearly one-fourth.

ATLANTIC SPERM FISHERY.

IN SMALL BARKS, BRIGS, AND SCHOONERS.

Years.	Vessels arrived.	Av. time absent. *Months.*	*Days.*	Sperm Oil. *Bbls.*	Whale Oil *Bbls.*
1842	56	13	28	280	12
1843	55	14	20	288	25
1844	42	12	—	248	38
1845	43	13	7	238	76
1846	48	14	7	259	14
1847	34	15	9	228	42
1848	31	16	21	303	18

The vessels employed in this fishery have diminished more than one-half in the past seven years.

RIGHT WHALERS.

SHIPS AND BARKS WHICH CRUISE MOST OF THE TIME FOR RIGHT WHALE OIL, AND DO NOT RETURN THE NEXT YEAR AFTER THEY SAIL.

Years.	Ships arrived.	Av. time absent. *Months.*	*Days.*	Sperm oil. *Bbls.*	Whale oil. *Bbls.*
1842	74	24	15	1,722	422
1843	90	25	10	1,937	422
1844	112	25	9	2,059	248
1855	101	24	—	2,180	196
1846	04	30	2	2,034	225
1847	150	31	7	1,978	195
1848	122	33	2	2,187	222

STOCKS OF WHALE AND SPERM OIL ON HAND.

	Sperm oil. *Bbls.*	Whale oil. *Bbls.*	Whalebone. *Lbs.*
January 1, 1848	5,690	29,170	921,500
" 1849	9,590	20,600	994,600

JOURNAL OF DISCOVERIES AND IMPROVEMENTS.

IMPORTANT TO GAS CONSUMERS.

[*From the Edinburgh Witness.*

Important Discovery—Hydro-Carbon Gas.—The discovery of this new mode of preparing gas is now attracting very general attention. It is prepared, by a very simple process, from rosin, or tar, and water; and is said to possess a vast superiority over coal gas in purity, brilliancy, and economy, whilst it can be prepared at little more than one-fifth the cost. Mr. White, the patentee, and his friends, have, we learn, been for some time engaged in simplifying and improving the apparatus for generating the gas, and have at present a beautiful model in daily operation in the establishment of Messrs. Hall & Wilson, Manchester, which, with only four retorts, each three feet long, and occupying a space of six feet by four, is capable of supplying about a thousand lights, while no purification is required, the gas passing at once pure from the retorts to the gasometer. This is certainly a remarkable contrast to the means requisite for the preparation of coal-gas. It is said, also, to be entirely free from the sulphurous vapors emitted by coal-gas, so injurious to everything bearing a fine polish; whilst the expense is calculated not to exceed from 1s. to 1s. 6d. per thousand cubic feet. Amongst other experiments tried at Manchester to test its purity, ground glass, which was said to be immediately stained on touching the common coal-gas, used in the town, came out of Mr. White's as pure and untarnished as ever; and a silver-plated jug became at once bronzed on being brought into contact with the town's gas; whereas, placed in Mr. White's, it was almost as bright as before. In reference to its properties, a letter was read at a recent meeting of gas-consumers, in London, from a gentleman in Nottingham, who lately had an apparatus fitted up in his premises for generating it; and after two months' experience, speaks of it as follows:

"I find the light still clear, brilliant, and free from any unpleasant smell, or sulphurous vapor. My men, and the work-people of the parties I have been supplying with your gas, experience no disagreeable sensation, headache, smarting of the eyes, &c., which is a great relief, after the coal gas. It is very cheap. I do not consider the expense of making it more than 1s. 3d., or 1s. 4d. per thousand cubic feet, (the cost of the coal-gas to the community in Edinburgh, is 6s. 6d. per thousand feet,) as the rosin, after making the first time, condenses in the cooling-box. I am able to use the contents of the box again, by adding three pounds of fresh rosin to two gallons of the condensed material, and still keep up the quality of the gas. I have made, on an average, one thousand five hundred feet per night—about seventy-two thousand cubic feet of gas since the apparatus was first put up."

At the same meeting, another gentleman pointed out the mode by which parishes, wards, or even separate streets, or single establishments, might be advantageously and profitably lighted by small companies or individuals; and explained how hydrogen gas from water alone might be employed for domestic purposes, where heat and light is required.

BRIDGE ACROSS THE MISSISSIPPI.

We find in the *Keokuk Dispatch* of the 20th ultimo a communication from S. R. Curtis, Esq., principal Engineer of the Public Works in Iowa, in respect to building a bridge across the Mississippi river at Keokuk. We understand that Mr. Curtis is an accomplished Engineer: and the opinion and estimates of such an individual upon this subject at the present time will doubtless be acceptable to our readers.

Bridge over the Mississippi.—According to promise, Mr. Editor, I give you a plan and an estimate of a bridge over the Mississippi river at Keokuk. The great difficulty in such a work is to find a point where we can build without any inconvenience to navigation, and such points can only be found at the rapids, where navigation is obliged to pursue certain fixed channels that we may span with an arch so high that the tallest chimneys of the loftiest steamboat, even in high water, cannnot by any possibility interfere with the work. On the lower chain of the rapids, at the upper end of Keokuk, is the best place to erect a bridge, because:—1st. We have a good solid rock to build all our piers on. 2d. The banks or cliffs on both sides rise about 160 feet above the water, and therefore a bridge from bluff to bluff will always be at least 60 feet above the tallest chimney of boats. 3d. The channels pursued by navigation are easily spanned by wooden superstructure, or chain bridges, so that piers would be no obstruction to navigation, even in high water, which never rises more than five feet on the chains, and boats must pursue the channel. 4th. Stone for piers is found in great abundance, in the bluff on the west side of

the river. It is magnesian limestone, and sandstone easily worked, and superior for strength and durability. 5th. A bridge crossing at this point strikes the 'divide,' a great natural highway which is now an established stage mail route for more than 200 miles west, connecting at Council Bluffs with the direct emigrant route to California, and eastward the bridge would accommodate the general direction of the Cumberland road extending westward in a straight line.

The plan I would recommend is simply a succession of stone piers of requisite size, each 160 feet high, all connected with wooden superstructure similar to that erected on the National road at Zanesville, Ohio, planned by Prof. C. P. Buckingham. The piers should be strong enough to resist the moving ice, and long enough, measuring up and down the river, to admit of two wagon and two rail road tracks. Side walks should be erected so as to project outside of the piers.—Such piers would then be sufficient if they are constructed one hundred feet long at the base, and forty feet at the top; thirty feet thick at the base, and ten feet thick at the top.

ESTIMATE OF COST.

33 stone piers, 8960 perches masonry in each pier of 25 cubic feet, at $7 a p., $62,700 for each pier, - - - - - - - -	$2,069,760
5000 feet superstructure at $30 per ft. run - -	150,000
Preparing foundation of piers and superintending work, - - - - - - - - - -	150,000
Total cost of the work, - - - - - -	$2,367,760

The ferries on the Mississippi are often interrupted by wind and ice, and at best they delay travel and trade. A bridge would therefore draw in the business of hundreds of miles. The emigration to the west, the California emigration, and the droves of horses and beef cattle, and sheep, would seek a bridge at the expense of several days travel.

To secure a profit on the cost of such a work the future as well as the present necessities should be considered. The receipts necessary to justify such a work, would at first be inadequate, but a few years would augment them to a great surplus. Let me add an estimate of the requisite income to secure 8 per cent. annual dividends:

Annual repairs on superstructure at 10 per cent, -	$15,000 00
Annual expense of toll gatherers, lights, &c., &c., - -	2,000 00
Annual dividends on the investment at 8 per cent, - - - - - - - - - -	189,580 00
Gross annual income required to secure 8 per cent-dividends, - - - - - - - -	206,580 00
Gross daily income necessary to secure 8 per cent, - - - - - - - - - -	566 00
Gross income per hour, supposing tolls are received only for twelve hours of the day, - - - -	46 00

It may be considered impossible to realize such an income, but I fancy some of your readers who best understand the amount of crossing

which now exists, and would accumulate if such a bridge were made, will demonstrate the early prospect of realizing such an income.

Respectfully yours,

S. S. CURTIS.

COMPRESSED AIR LOCOMOTION ON COMMON ROADS.

The London *Mining Journal* says that a third trial was made a short time ago for testing the capabilities of Baron Von Rathen's compressed air locomotive for working the air expansively and which operated very well although there was one or two leaks which subtracted somewhat from the real power.—As it was, however, the carriage, weighing 3 tons, and carrying from 25 to 30 persons, started in good style, and kept pace with former experiments, as to time and distance: the motion was very regular, and the machinery stood well—the only casualty being the above leakage. The patentee considers he has now completely solved the problem of the practicability of employing compressed air in locomation, and regulating it as to distance, speed, load, nature of road, &c.—on which, with the greater or less perfection in the construction of the machinery, its success, of course, depends. He is prepared to show to mathematical demonstration, that he can embody sufficient power in this model air-carriage to carry 4½ tons, including carriage, 10 miles in one hour on common roads, or a train of 45 tons in the same time the same distance on a railroad; but if carried out on a large scale on the latter, he contends that the system would effect a saving of 75 per cent over the steam locomotive.

MANUFACTURE OF LINEN FABRICS BY STEAM.

New Inventions.—A London letter of the 31st August, published in the N. Y. *Commercial Advertiser*, has the following items:

A valuable invention has been made in Belgium. It is destined to effect as great a reform in the manufacture of linen cloths as the steam loom has made in that of wollens. It is nothing less than a steam loom for linen frabrics. All the ingenuity and perseverance of manufacturers have been tested to invent a machine of this kind; but the fabrics have been uniformly so poor that the machines have been thrown away and mannual labor again resorted to. The difficulty has been removed by the scientific skill of a Belgian engineer. A model of his machine, with specimens of the fabrics, has been exhibited at the fair at Ghent. The cloths are said to rival in firmness, fineness and smoothness, the best of those made by hand. If, on farther trial, it shall be found practicable on a large scale, a revolution will doubtless be effected in the linen industry of Belgium, which will have a powerful influence on the political condition of the country, one half of the population of Flanders living, in one way or another, on the profits of that industry.

LEWIS' PANORAMA OF THE MISSISSIPPI RIVER.

A painting, and panoramic representation of the Mississippi river, from New Orleans to the Falls of St. Anthony, have recently been completed by Mr. Henry Lewis, of this city.

The work is divided into two parts; one representing the river from St. Louis to the Falls, and the other, the lower section. The length of the picture of the upper Mississippi, is 825 yards; and of the lower, 500; whole length, 1,325 yards, by 12 feet in highth. This is ths largest picture, we imagine, that has ever been painted. We are informed that Banvard's celebrated painting of the Mississippi, is only 440 yards in length; Stockwell's, about 625 yards; and Pomarede's about the same in length as Stockwell's. We are informed that the idea of painting the Mississippi river for panoramic exhibition was conceived first by Mr. Lewis, and by him suggested to Banvard, who, according to report, has already realized a large fortune from the exhibition of his work. Mr. Lewis, like most men of genius, has had difficulties and disappointments to contend with. In a communication to us, he says: "I became connected with Mr. Stockwell in an agreement to paint this subject. Pecuniary difficulties, and a difference of opinion as to the best method of doing the work, finally broke our connexion." Subsequently he formed connexion with Mr. Pomarede, and this was also dissolved. "Finally," he says, "I started alone, in the month of May, 1848, to sketch the river. I had been up, the two summers previous, reconoitering the country, and making drawings from Fort Snelling to Prairie du Chien, and exploring the tributaries that empty into the Mississippi between these two points. I commenced painting on the 20th of September, and finished the panorama of the upper river by the 20th of June; that of the lower river was finished in September. I made the sketches from a small boat built for the purpose, and was forty-eight days in the trip."

As an artist, Mr. Lewis is self-instructed. He came to St. Louis about thirteen years ago—a youth, and a mechanic. He has recently departed on a tour to exhibit to the world the fruits of his genius and enterprise; and we think he cannot fail to realize a most brilliant reward.

Owing to our limited knowledge of the principles and rules to be observed in producing works of this nature, we cannot venture an opinion in regard to the merits of the design, or the correctness with which the author has executed the details of this painting. We went to see it in the same spirit that we are wont to ramble through the living forest, and beside the flowing river—with a heart open to receive the delightful impressions which the beauties and grandeur of nature never fail to impart to those who worship at her shrine; and we can say with truth, that we never enjoyed a higher degree of pleasure from the exhibition of any work of art that we have witnessed.

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ART. I.—PACIFIC RAILWAY CONVENTION AT SAINT LOUIS.

Apprehensive that some of our readers may have become weary of this topic, we beg to state the reasons why, for several months past, we have devoted so large a portion of the *Western Journal* to the subject of a railway to the Pacific ocean. Meeting, as it did, with the cordial approbation of the editors, and coming within the scope and design of their labors, they deemed it to be their duty to bring to the support of this great project all the aid in their power. And believing that the measure was too vast, and important in all its bearings and consequences to be left solely to the management and direction of statesmen and politicians; and, that Congress would not be likely to take any definate action in respect to it without an expression of the people in its favor, we suggested the assembling of a Convention at some place east of the Alleghany Mountains, for the purpose of ascertaining the sense of the people of every part of the Union, in respect to the policy of undertaking the work.* But our suggestions in regard to a convention to be held in some of the eastern cities, receiving no favor from the people of the Atlantic States, a few enterprising citizens of St. Louis succeeded in making arrangements for a Convention in this city, to be held on the 15th day of October, 1849.

The proposition for a national Convention having originated with us, it was our duty to appropriate a portion of our pages to the publication of facts and arguments relating to the subject proposed for consideration. The proceedings of the Convention have now become historical facts: and as we believe it to be one of those events which is destined to stand out in bold relief in the annals of the valley of the Mississippi—not to say of the age in which we live—we could not consistently omit to record the principal facts connected with its deliberations and proceedings.

The Convention was designed to be purely national in all its as-

*See the April number of the Western Journal, page 216.

pects, and bearings; and this was the leading *idea* of those who devoted their time and labor towards getting it up. This was a new principle of action to a large portion of the people of this country; and one not easily comprehended, especially by politicians, who found it very difficult to seperate the idea of a Convention, from an assembly called for political purposes. But when it was ascertained that a strong national sentiment prevailed, and that a large portion of the delegates were resolved to look alone to the legitimate purposes of the Convention, it was gratifying to observe how soon this national sentiment pervaded the entire body.

In contemplating the glorious consequences of the great enterprise, local prejudices, and local interests were forgotten; whigs and democrats stood side by side and joined in the advocacy of the same propositions: there was a fusion of every feeling, of every sentiment into one—and that one was American.

On the third day of the Convention, Mr. S. Mason, of Ohio, from the committee on resolutions, made the following report :—

"1. *Resolved*, That this Convention is, in its spirit and object, strictly national, having no party, no sectional, no local interests to serve or promote, but having at heart the interest of the whole country.

2. *Resolved*, That it is the duty of the Congress of the United States to make immediate provision for the construction of a great trunk railroad to the Pacific ocean, in California, with a branch road to Oregon, from such point in the Mississippi valley, or on the frontier of the States, as may be found from examination and surveys, to be most eligible and convenient, with reference to the existing and prospective state of the country, and the population and convenience of the whole Union, and that it should be diligently prosecuted by the Federal Government.

3. *Resolved*, That the various lines of railway, now either complete or under process of construction, from Savannah, Charleston, Richmond, Baltimore, Philadelphia, New York, and Boston, tending to, and connecting with the Mississippi valley, are only parts of the great whole, which the general government is asked to consummate by the Mississippi and Pacific railway; and that these eastern connections now being prepared for it by uniting all interests, guarantee the perfect nationality of this work.

4. *Resolved*, That, as an important means, as necessary and preliminary to the construction of such railroad, it is the first duty of the American Congress, immediately upon its assembling together, to make provision for the establishment of military posts, from the western confines of our western States to the Pacific ocean, that these posts should be established numerously, in all proper places, not far distant from each other; and that civilized and productive settlements should be encouraged around them, by liberal sales or grants of the public lands; by extending ample protection to the settlers, and to the transport of their stores and merchandize, &c., &c.: so that by these means full opportunities may be afforded to our Topographical Engineers for the immediate reconnoissance and survey of our vast possessions,

reaching to the Pacific, and one or more practical roads, with facilities of travel, immediately formed for our citizens, across our own territories from the Atlantic to the Pacific shores.

5. *Resolved*, That the Congress of the United States be memorialized to construct, or authorize the construction, of a national line of Telegraph along the route, which may be determined upon by national authority for the great railway to the Pacific.

6. *Resolved*, That a committee of five be appointed by the President of this convention, to prepare and publish an address to the people of the United States, urging their co-operations in procuring such action on the part of Congress as may be necessary to carry out the views of this Convention."

When these resolutions had been read, the Hon. R. W. Thompson, of Indiana, after an address of great force and eloquence, offered the follong resolutions in lieu of those reported by the committee :

"*Resolved*, That in the opinion of this Convention it is the duty of the General Government to provide, at an early period, for the construction of a Central National Railroad from the valley of the Mississippi to the Pacific ocean.

"*Resolved*, That in the opinion of this Convention, a grand Trunk, Railroad, with Branches to St. Louis, Memphis and Chicago, would be such a central and national one.

"*Resolved*, That a committee be appointed to communicate to the Convention to be held at Memphis, the foregoing resolutions, and to request the concurrence of said Convention therein."

These resolutions were finally adopted without a dissenting voice.

It will be perceived, that, although the Convention refrained from expressing any opinion upon many important questions which must necessarily arise in adjusting the details of a law authorizing the construction of the road, yet, it went as far perhaps, as it was proper for it to proceed under the circumstances. Two important points have been attained: first, an emphatic recommendation in favor of the construction of the work by Congress : and second, an agreement in respect to the branches. It cannot be disguised however, that much dfficulty yet remains in respect to the latter. There is a large and respectable portion of the people of the Union that hold the opinion that Congress has no power to construct public works within the limits of the States. Some of these were in the Convention: and after the foregoing resolutions were adopted, they asked, that, Mr. Thompson should explain the second resolution, so as to prevent it from being construed as asserting the right of the general government to construct the branches within the States through which they may pass. In consequence whereof the following explanation was submitted to the convention, and ordered to be spread upon the journal.

"Mr. Thompson, of Indiana, in explanation of the second resolution offered by him on yesterday, and adopted by the Convention, said—that in preparing that resolution, it was his especial and earnest design so to frame it, as to express no opinion on the question of the power of the General Government over internal improvements within the States ; neither to affirm or disaffirm that power. His sole object, by

avoiding that question, was to present to the Convention a proposition upon which every member of the Convention, of whatever political party, might stand in perfect union and harmony. He intended simply to assert that the General Government had power to construct the main trunk of the road, and that the question as to the manner of constructing the branches, whether by the donation of lands or by the States themselves, should be left open for the final determination of Congress."

The following resolutions, being the substance of the 4th and 5th resolutions reported by the Committee on resolutions, were offered by Judge Treat of Mo., and adopted by the Convention.

"4. *Resolved*, That, as an important means, as necessary and preliminary in the construction of such railroad, it is the first duty of the American Congress, immediately upon its assembling together, to make provision for the establishment of military post, from the western confines of our Western States to the Pacific ocean; that these post should be established numerously, in all proper places, not far distant from each other; and that civilized and productive settlements should be encouraged around them, by liberal sales or grants of the public lands; by extending ample protection to the settlers, and to the transport of their stores and merchandize, &c., &c.

5. *Resolved*, That the Congress of the United States be memorialized to construct, or authorize the construction, of a National Line of Telegraph along the route which may be determined upon by national authority for the great Railway to the Pacific. Said line of Telegraph to be constructed in connexion with the Military post named in the preceding resolution, and to be pushed to completion as early as practicable."

It is not our purpose to give all the details of the proceedings: we aim simply to record such portions thereof as bear immediately upon the main subject, and, which received the affirmative action of the convention.

Fifty delegates were appointed to attend the Convention to be held at Memphis, on the 23d Oct., 1849. A committee was appointed to prepare a memorial to Congress, and an address to the people of the United States: and finally, the following resolution offered by J. Loughborough, of Mo., having been adopted, the Convention adjourned on the fourth day, amidst the hearty cheering of the delegates and spectators.

"*Resolved*, That when this Convention adjourn it will adjourn to re-assemble in the city of Philadelphia, on the first Monday of April next: that we hereby invite our brethren who will assemble at the city of Memphis, on Monday next, to adopt a similar resolution; and that the committee upon an address to the people of the United States, be hereby instructed to appeal to every State, county, city and town of the whole glorious Confederacy, to send up a delegation to give expression to the will of the American people."

When we contemplate the object of this Convention, the consequences that may be expected to result from the consummation of that object, the truly American feeling which pervaded the heart of every

delegate, especially towards the close of their deliberations, we experience emotions of profound gratification.

We have ever possessed the most perfect and abiding faith in the permanency of the Union of the States, in the undivided and indivisable destiny of every member of the confederation; and were delighted that, an opportunity was afforded to such as entertained doubts in respect to the stability of the Union, to see and feel, that, notwithstanding local jealousies and party strifes are permitted to mar the social harmony, yet, that, when great subjects touching the welfare and glory of the nation are presented for deliberation, the American people are ready to forget their petty quarrels, and like brothers who have fallen out at play, join heart and hand, in a common cause.

Upon the whole, this Convention has been a refreshing season; a season of sympathy and of fraternization of the inhabtants of this great valley; and if the object for which the Convention was called, should never be consummated, yet we believe that it will be the means of improving the social condition of the inhabitants of this region; it will serve to extend and establish their sympathies, encourage them to place more reliance upon their own great resources, incite a spirit of honorable emulation between different sections, and, finally, cause them to abandon the party strifes that have so long disturbed the social harmony and delayed the improvement of the country.

But, if, as we hope and believe, a railroad should be constructed from the Atlantic to the Pacific ocean, then this Convention will have been instrumental in promoting a work calculated to produce a more extensive and ameliorating influence upon the condition of the human race, than any that has ever been achieved by man; and though every part of the habitable globe must be benefited by it in the end, yet the first fruits of the work will enure to the inhabitants of this valley The commencement of the work, with a reasonable prospect of its completion, will give an impulse to the development of the resources of the West, that will astonish the world — even in this age of wonders. But much remains to be done before this mighty work can be commenced; and in the mean time it is the duty of every individual who feels an interest in the prosperity and glory of the country to do every thing in his power to propogate and cherish the spirit of enterprise, of concession, and of harmony that governed the late convention in its deliberations—LET MEETINGS BE CALLED IN EVERY COUNTY, CITY, AND TOWN OF THE UNION, TO RATIFY AND RESPOND TO THE RESOLUTIONS OF THE ST. LOUIS CONVENTION—AND TO URGE UPON CONGRESS THE IMPORTANCE OF IMMEDIATE ACTION UPON THE SUBJECT. Do this, and there will be no need of a Convention at Philadelphia on the first Monday in April next; for before that time, Congress will have done all it could, or ought to do in the premises.

ART. II.—GEOLOGICAL SURVEY OF THE STATE OF MISSOURI.*

With its present resources, it would be impossible for the government of the State of Missouri, to conduct a Geological survey on a scale suited to the importance of the subject. A large portion of the population still struggling with the difficulties and privations of all new settlements, with little surplus beyond that necessary for their own subsistence, find the present rate of taxation, if not oppressive at least very inconvenient to meet. Many years must elapse before this condition of things can be removed. Our present population is probably about 500 thousand; if these were as comfortably established in their homes as the average of the inhabitants of the eastern or middle states, they would not be able still to meet such increased demands upon them even for an object of such pressing public good. But such is not the case; in the greater part of the state, there are demands, immediate, local and individual, that, with the most liberal minded must take precedence of those of a more general character. Roads must be opened for convenience, and for the transportation of whatever surplus produce they may have, to market. School houses erected and education provided for; clothing and the necessaries of life not within the range of domestic produce or manufacture, bought. Ploughs, hoes, and other agricultural implements are indispensible, &c., &c. These are imperative wants that have first to be attended to. If our present population were condensed as they are in the eastern or middle states, we might expect them provided for, in a few years and the people prepared to meet demands upon them for objects of a more general character. But they would have to bear a ratio to the means the people have to meet them even then. By the last census Massachusetts had an average population of more than 101 persons to the square mile. Connecticut 65, New York nearly 53, whilst Missouri had but five and seven tenths and now probably about seven. Those older and more wealthy states might well undertake geological surveys, on the most liberal scale, from their own resources, but it would be oppressive to the people of Missouri, to follow the example.

If the Congress of the United States, should unfortunately, leave this matter to the people of Missouri, with the expectation that their knowledge of its importance and their public spirit will induce them to

*Several typographical errors, both in terms and punctuation, have been discovered in Dr. King's article published in the last number. For which we can offer no other apology than that of our intense engagements, and the hurry with which that number was printed. Some of these errors run through the whole edition—others were detected and corrected after a part had been printed. The reader will please make the following corrections—At page 20 line 46 for *procrastiny* read procrastinating—at page 25 line 18 for *tunstale* read *tungstate*. Errors will be discovered in spelling the names of several other minerals, several words are omitted in the sentence ending in the 1st line of page 25. The punctuation at page 21 is particularly defective. EDITORS.

undertake it, unaided, they will inevitably, be greviously disappointed. We do not believe that its warmest friend, could expect or desire the attempt to be made at this or any reasonable remote period. It would unquestionably result in the most painful disappointment, and probably retard rather than hasten its ultimate accomplishment. The people of Missouri are fully aware of its importance, and they will freely do all they can or ought to be expected to do, to accomplish it, but they are too well aware of their situation and capacity, to commit so great an act of indiscretion, as to undertake it without the co-operation of the United States government. But Missouri expects and she has, to use the mildest expression: reasonable grounds to expect, that the intelligence of Congress will not leave her in such a predicament. She has reason to expect that the government of the United States has interests, pecuniary and national, sufficient to insure its ready co-operation.

But she has even more, she has justice, even handed justice, the common rights which operate between man and man to cause her to expect a favorable response to her memorial. The government of the United States yet holds two thirds of all the lands in this state. From these Missouri derives not one cent of revenue. It is impossible to make this survey without including these lands, and they are or at least a large part of them, the very portion that will be most benefitted by it. Will the Congress of the United States, refuse its aid, where it is so greatly interested, and turn with indifference from the consideration of the means of advancing the prosperity of one of the most important states of the Union? Refuse a pittance that would be unfelt, and which would be appropriated to objects of such great state and national importance? If the lands of this state were all in the hands of her own citizens, and consequently subject to become a source of revenue to her treasury, self respect would forbid an appeal to any other quarter, for co-operation or assistance. Her citizens would gladly make known her resources to their fellow-citizens of other states, and feel a just pride in the addition, which they believe their development will make, to the prosperity of the nation. Science and art of the highest grade would be invoked and no state would be classed before her in the liberality of her views or expenditures. But what can it be expected of her in her present situation? Is it reasonable to hope that she will tax her own citizens for this purpose when they have already and comparatively recently, paid into the treasury more than twelve millions of dollars,* for the lands they have bought of the United States. Must these hardy adventurers be required to contribute still more for the public benefit or forego the advantages that science and a proper appreciation of the resources of their state would give them? If the government of the United States would allow her lands to be taxed as Missouri taxes the property of her citizens, or even at the price they are held as public land, no assistance we are satisfied would be asked by our Legislature. The public lands of this state amount to more than 29,700,000 acres, these at one dollar and twenty-five cents per acre is more than 37,000,000 of dollars, which at the moderate taxation of 16 2-3 cents on the hundred dollars, the present state tax

*See appendix to the report of the Commissioner of the General Land Office, Ex. Doc. No. 12, 13th Cong. 2d session.

would give 49,500 dollars per annum. This sum added to the present resources of the state would enable Missouri to conduct a geological survey on a scale, inferior to no other state of the Union.

This train of reasoning is not, however indulged in, with the expectation that the United States will change its present policy on this subject. We have no disposition to disturb the relationship that exists between the public land States and the General Government. But it is a legitimate argument for showing the mutual interest that the national Government has in this matter, and the right Missouri has to expect its co-operation. The question, indeed, seems so plain, that we are not sure if we have not weakened, rather than strengthened it, by what we have already said. We do not profess to have much acquaintance with law, but we do affect to have some of common justice. If a propietor in part of a piece of property should refuse to join in its improvement, when perfectly able, and requested to do so by the co-proprietor, and which improvement would be very important to one, and mutually advantageous to both, he might not be subject to an action at law, but he certainly would commit an act of gross injustice, as well as folly. A parallel action on the part of a government whose interests are both special and general; who should as cordially promote the prosperity of Missouri as any other section of the Union, would, if possible, be something worse.

This is not a new subject for the consideration of Congress. By its own repeated action it has declared the propriety of such surveys. Lewis and Clark's, Pike and Long's expeditions, formerly, and more recently, the explorations of Nicolet, Fremont, Emory, and others, though mixed up with other matters, were more or less geological.

Every thing that relates to the physical character of the earth, or to its natural productions, belongs to, or is intimately associated with, geology. Its mountains, plains, and valleys, its rivers, seas, and climate, as well as its rocks and minerals, come within its range. And even animated nature, living and extinct, tells a tale that must not be unheard by the faithful historian of the earth. These enterprising and scientific explorers have contributed almost as much to our geological as geographical knowledge of the regions they traversed. The exploring expedition under Capt. Wilkes carried with it a corps of scientific men, who returned laden with nature's novelties, and a rich store of knowledge relating to geology and natural history. All of these originated in, or were approved by Congress; and by its authority, the result of their labors have been presented to the world.

But the action of Congress has been even more specific than this. It has ordered several explorations specially and distinctly geological, for the investigation of the mineral resources of certain portions of the public domain. It has appropriated the public funds freely and liberally for them, and the public has approved its course. The only novelty in the memorial of our Legislature, the only difference asked in the action of Congress, from what has been done in these cases, is that lands not money should be appropriated, and that the survey shall be confided to the State. This difference is important; it saves expenditure of the public funds; it will be equally, perhaps more economicaly, and it will give a greater breadth of scientific investigation

to the survey. It is therefore an improvement and more worthy the support of the National Government.

It is true that the lands asked for by the memorial have a value, but the realization of that value by the general Government will, under existing circumstances, be very remote. It is probable that a large portion of the locations made by the surveys would be in the mineral region, a portion of the public domain now in least demand; it is therefore an appropriation of the public lands more advantageous than is generally made by Congress. They are most commonly given for objects of internal improvements, passing through lands being settled more rapidly; and from which Government might soon expect to realize a return without adventitious excitement.

Although the writer has given himself considerable trouble, both here and in Washington City, to ascertain the amount the Government has expended in its several geological surveys, he has not been able to obtain sufficient data, to enable him to make a perfect statement of it. An approximation however, sufficiently near for comparing it, and its results with the appropriation asked for by Missouri, can be made from published documents.

We pass over the first small appropriation of a few thousand dollars, expended by Mr. Featherstonehaugh, of which the mildest thing that can be said, is, that it was money thrown away, and take up the survey of Dr. D. D. Owen, of the mineral region of the Upper Mississippi, in 1839. No regular appropriation seems to have been made for that survey; at least the writer has never been able to find one, and no statement of its cost accompanies the report. It was published by order of Congress, without the plates, in 1840, and republished by the same authority, in a larger edition, with them, in 1844. Its cost, including publication, was variously estimated in Washington by those most competent to form a correct opinion, at from sixty to eighty thousand dollars. We think it can be safely put at the former sum.

The first appropriation for the geological survey of the copper region of lake Superior, was made in the General Appropriation bill, approved June 17th, 1844, for the fiscal year ending 30th June, 1845, and was for twenty thousand dollars. A contract for the expenditure of this was made with the lamented Dr. Houghton, State geologist of Michigan.

No appropriation seems to have been made for 1846; but for the year 1847, a further sum of thirty thousand dollars was appropriated; and for 1848, another sum of fifty thousand dollars was appropriated "for surveying the copper regions of Michigan, Wisconsin, and Iowa, with reference to mines and minerals;" and in 1848, "for compensation of geologists, assistant geologists, laborers, packmen, and incidental expenses attending the geological examination and survey of the mineral lands in Michigan, Wisconsin, and Iowa, including the amount required for the third and fourth quarters of the year ending the 30th June, 1848." Another appropriation of forty thousand dollars.*

The whole, including the estimated cost of Dr. Owen's first survey, amounting to the sum of two hundred thousand dollars. No appropriation was asked for the present fiscal year, commencing on the 1st of

*General Appropriation Bill, approved August 12, 1848.

July, 1849, as the several persons to whom these surveys were committed, were instrueted to bring their operations to a close during the past season. This, however, it is believed they have not been able to do. It is therefore probable that another appropriation will have to be made at the next session. The working up of the materials collected into a full report, the analysis of the ores, preparation of maps, drawings, &c., together with the final publication, is yet to be provided for; and for these, at least twenty-five thousand dollars, we presume, will have to be expended.

This will make the total of what has been, and will have to be expended in the geological surveys of the mineral regions of Illinois, Iowa, Wisconsin, and Michigan, two hundred and twenty-five thousand dollars *in money.*

Until the reports shall have been completed and published, it cannot be said what may be the total area embraced in these several surveys; but as an approximation, it may be safely estimated not to exceed one-half of that of the State of Missouri; and without intending to institute any invidious comparison, we do not hesitate to state it as our firm conviction that it does not equal the mineral region of this State in the value of its mineral resources, nor in the variety of its minerals, if it does even in extent.

The State of Missouri asks Congress to appropriate or donate her, in aid of her proposed survey, an amount of *public lands*, equal to one township in each land office district, which, as there are eight land districts, would be one hundred and eighty-five thousand three hundred and twenty acres; and this, at one dollar and twenty-five cents per acre, would amount to two hundred and thirty thousand four hundred dollars, being only five thousand four hundred dollars more than the estimated amount that will be required to cover the expense of the surveys in the four other States just mentioned.

This naked comparison does not however do justice to Missouri. Independent of her much greater area, the manner in which this survey will be conducted by this state, will be, we apprehend, on a much broader scientific basis, more deliberate and minute in its investigations, and therefore of more practical importance than those which have been made by the United States Geologists. We disclaim any want of confidence in the abilities or industry of the gentlemen who occupy this distinguished position, or any doubt but that their reports will add to the reputation they already enjoy. The difference that we anticipate, results from the different objects the two governments will have in view, in such surveys. With the United States Government, the primary object is to learn the extent and character of the minerals and mineral lands, as is evident from the acts authorizing the surveys; all other information is necessarily incidental or secondary. This is not the case with a properly conducted state survey. From natural causes Missouri may be an exception, but generally the agricultural, zoological, botanical and physical character of the country, takes precedence of its mineral resources properly speaking. A survey of Missouri will therefore not be merely a description of its mines, or metallurgic capacities, as is principally to be expected from the U. S. surveys, but will embrace, if properly conducted, every thing relating to its natural

history, agricultural, manufacturing and commercial capabilities. Such was the case with New York, and such we presume will be the case with the surveys of the states that have been since commenced. This is more especially necessary in a new country, because it is impossible to form a correct opinion of it, without knowing something of its character and natural productions, as well as the effects of cultivation and civilization upon it. The natural history and physical qualities of a country, indicate its capabilities of being made subservient to the uses of civilized man, and the difficulties he may anticipate in causing it to contribute to his necessities or luxuries. Three fifths of the state of Missouri may be considered as purely agricultural in its character, and the remaining two-fifths, probably equal in agricultural capabilities, to the average of the New England states. To make the mineral resources of such a country the paramount object of investigation, would be to neglect many of the most valuable purposes of a complete geological survey.

It is true that the most of the arguments used by us in favor of the memorial of the Legislature to Congress have been based upon the supposed mineral resources of the state; but this has not been from not having a due appreciation of the advantages its other interests will derive from this survey. It must be recollected that these articles are not written to convince our own citizens of the benefits they may expect from such a survey, this it is hoped and believed would be superfluous; but to show that the interest of the United States, will be promoted, by an act of common justice to Missouri. Our agricultural capacities are generally similar to those of the other western states of the same latitnde: although experience teaches us that such surveys are highly advantageous to the intelligent farmer, it is not certain that in this state it would increase very much the rate of sales of the public land. The increase which it would undoubtedly cause, in the produce of the acres under cultivation, would be a national benefit, but this is an argument that can be used with equal force by every public land state. It has not been deemed necessary therefore to dwell upon the subject above referred to, but it is a proper occasion to state that so far from being forgotten, they are considered to be amongst the most important objects of the survey to the state.

This is a favorable occasion to call attention to two other mineral productions, which there is every reason to believe will be found throughout what we have designated the agricultural portion. We refer to salt and coal. In our former article we indicated the demarcation between the two great geological, or rather economical divisions of the state. Salt springs burst forth throughout the whole of this line, with an uniformity of position and character sufficient to render it in the highest degree probable, indeed reasoning upon geological principles, we might say certain, that they belong to the formation in which they are found, and as this belongs to the agricultural portion of the state, that therefore by means of artisean wells, this important mineral may be had throughout the whole of this region. We called attention to this in our report to the Board of Internal Improvements in 1840, but as no subsequent explorations have been made in relation to it, it yet remains a question for determination. When salt was somewhat

more costly than it has been for some years past, these springs, though largely diluted as they must necessarily be, by surface water, were in many parts of the State profitably worked. Artisean wells by bringing us directly in contact with the salt from which they originate; or the *mother water* free from dilution, would in all probability, render salt works again valuable, supplying not only our own wants, but probably all the Upper Mississippi Valley.

The agricultural region covering what is scientifically called the carboneferous formation, abounds in bituminous coal, well adapted to manufacturing and domestic purposes. There is every reason to believe that it will be found throughout the whole of this region, and if the reports we have heard of it, can be relied on, the beds or deposits in some instances, are of extraordinary thickness. It is within my own observation, to know that it is frequently found in our western prairies very near the surface, affording a convenient and cheap fuel for the settlers. One of the beds crops out near St. Louis, from which a large portion of that consumed by her citizens and manufactories, is obtained. At the distance of about 300 feet, perhaps less, below this city there ought to be (speaking geologically) and in all probability there is another bed, corresponding in character with what is known as the Osage river or Cannel coal. The determination of this latter fact, which rest we know on the highest degree of probability, would be of great importance, as this coal would be preferred to all others for our steamboats, and by gas manufacturers.

These and great many other probabilities, remain to be determined by geoligical researches. They will all be embraced in a state survey, whilst many of them would be omitted, and others but incidently noticed by a survey, conducted as those of the mineral regions of Illinois, Iowa, Wisconsin, and Michigan, under the authority of the United States Government have been. Missouri offers to do all that was required in these surveys, and much more. Upon what grounds can her proposition be rejected or neglected? The representatives of Missouri in Congress have evinced a liberal, and even a zealous feeling for the surveys of the other mineral states. Linn and Relfe we believe were amongst their warmest advocates. The people of Missouri approved this feeling, it was in fact but an echo of their own. No petty jealousy exists in Missouri against the growth and prosperity of any sister state. No fear of injury could create a feeling of rivalry, beyond that of honorable competition. This State feels proud of everything that tends to advance the prosperity and grandeur of the nation, and cordially sustains every constitutional measure that may tend to develope its resources, from the St. Johns' to the Rio Grande, from the shores of Lake Superior to those of the Gulf of Mexico, or the Pacific ocean.

This offer of Missouri is not a novelty. The precedent was established in the surveys of the Lake Superior copper mines, upon a broader basis than is proposed by this State, and if it had not been for the untimely end of the State geologist, Doct. Houghton, it is more than probable that the whole of that region, or at least all of it embraced in the territories of Michigan, would have been surveyed by that officer, in connection with his other State work, and paid for by

special appropriations by Congress. At the time of his death he had nearly completed his first contract for work amounting to twenty thousand dollars, and there can be little doubt, but that the largest portion of what has been since appropriated, would have been expended in the same way, if he had lived. We are not aware of any objection to the appropriation, or the mode of expenditure that has ever been made. The continuance of the surveys subsequently, by geologists who held their appointment directly from the government of the United States, would seem on the contrary to indicate that the measure met with popular favor.

In asking the co-operation of Congress therefore, Missouri only asks that, which has been already acceded to others. Upon what grounds could be based an argument for a refusal? It surely could not be upon the relative value or extent of the several territories. It could not be upon the agricultural or mineral resources of the several regions, nor upon their climate, or commercial and manufacturing facilities. On all these, Missouri, without pride but with confidence, presumes to rank herself amongst the greatest States of the Union. Her people entertain this opinion, without vanity or selfishness. The prosperity of every other State is gratifying to them, and they offer a cordial welcome to all who desire to make a home amongst them. But they do not desire to allure them by false representations. They would invoke the light of science that the whole Union might see for itself, and participate in their blessings. It will be for the Congress of the United States to say whether such generous sentiments are appreciated.

ART. III.—REVIEW OF THE DECISION ON THE PASSENGER LAWS OF MASSACHUSETTS AND NEW YORK.

George Smith, Plaintiff in Error.

vs.

Wm. Turner, Health commissioner of the Port of New York.

James Norris, Plaintiff in error.

vs.

The City of Boston.

The above are the titles of two causes decided in the Supreme court of the United States at its December term of 1848, involving the question of the power of the States to tax passengers from foreign ports.

This involves a question of great moment, especially to the west.—They were elaborately argued by the greatest counsel in the nation—were discussed in separate opinions by all the judges of the Supreme Court, except one, and the opinions of the judges were printed in a public document by the Senate of the United States, owing to the important political bearing of the subject, but a bare majority of the court concurred in the decision rendered in these cases. A point so contested, of such great interest, and determined but by the majority of the court, against the opinions of some of its ablest members, cannot be considered as settled, and we have, therefore, thought it might not be uninteresting to our readers, to lay before them, some account of the cases, and some views in reference to them.

The power to impose such a tax was maintained to be unconstitutional, principally on the ground that the tax was in effect a regulation of foreign commerce conflicting with the regulations of Congress made in virtue of the power over the subject lodged in the general government by the constitution. Whether or not regulations of commerce made by the States were in operation merely by force of the constitutional grant was an immaterial point to the decision of this question, it being held that the power had been actually so exercised by Congress as that the laws in question conflicted with the regulations of Congress.

The constitutionality of these laws was maintained by arguing that there was no such conflict in the regulations of the State and National governments as to anull the State laws and that the States had a power over the subject of foreign commerce concurrent with or a subordinate to that of Congress by which it was admissable for them to make regulations, not in conflict with those actually made by Congress.

Secondly. By asserting the power of the States to pass such laws in virtue of their general power to tax all things, or objects which they are not prohibited from taxing by the constitution of the United States either in express words or by necessary implication; and by maintaining that this tax is not prohibited in that way.

Thirdly. It is argued that these laws are warranted under the authority which the States possess over the subject of internal police, and this is the power under which from their positions in the statutes they would appear to have been enacted. The power by which health laws, poor laws etc., are enacted.

Neither of these powers claimed for the States are controverted by the court in its decision although in the arguments of some of the Justices who give the decision of the court it is denied that the States have any power to regulate foreign commerce, because that is granted to Congress and is a power exclusive in its nature. The language of the constitution is that "Congress shall have power to regulate commerce with foreign nations and among the several States and with the Indian tribes." The subject which the language of the first branch of this sentence commits to Congress for regulation it is argued is the commerce of the United States with foreign nations. It is the subject which forms the chief if not our only relation with foreign nations and to whom none of our political relations are known except the

Government of the Union. To them therefore both politically and commercially we are one people. Our ships, seamen, and citizens are the ships, seamen, and citizens of the United States, and for all the purposes of foreign commerce, our ports, harbors, rivers, lands and waters, are ports, harbors, rivers, waters and territory of the United States, and the authority of the Government must be co-extensive with all the relations of the subject. And as no other Government has any duty or responsibilities connected with it either to our people or to foreign nations, no other Government ought to meddle with it.

Indeed it is argued further, that such interference must necessarily be in conflict with the regulations of the General Government. That no regulation can be made by the States which changes or in any degree modifies the existing laws in relation to the subject but what will be deemed in conflict with the rule of Congress. Because from the nature of the subject it results that everything not embraced in the positive enactments of Congress is left subject to the course of the common law of nations. Positive laws are not at all necessary to permit commerce. The right exists by the just commune of nations, and all regulations respecting it are restrictive. It is only what is forbidden that is unlawful—and whatever is unforbidden is lawful. It follows from this when a Government is clothed with power to regulate commerce and has declared by law what it restricts it declares the rest free, and that it is impossible that any other Government should at the same time be permitted to put any further restrictions upon the restricted list or in any wise restrict the free list without admitting the power of such Government to defeat and put aside the will of the other. Indeed there would seem to be no avoiding the conclusion that a power to regulate trade is exclusive in its nature, nor can force be allowed to the argument drawn from the fact that the States have been suffered to exercise the power of passing bankrupt laws, and laws respecting weights and measures, the militia, &c.; because in the first place, these were not bankrupt laws, or laws respecting weights and measures, the militia, &c., of the United States; but simply laws respecting those subjects within the State enacting them, which have been held valid, as respects those subjects within their jurisdiction.

And, secondly, because the ground upon which such laws have been held valid, cannot exist, as we have already shown, in respect to those affecting the subject at present under consideration. The ground was, that the mere existence of power in Congress "to establish uniform laws on the subject of bankruptcies throughout the United States," to provide "for organizing, &c., the militia," to "fix a standard of weights and measures," without the exercise of such powers, did not take away from the States the right to legislate on those subjects. It appears, from what has been already said, that this reason can have no application to laws affecting commerce, because it does not require legislation on the part of Congress, in order to give effect to its power over commerce, as it does with respect to the powers to which the reason applies.

But this is not the point of difficulty in these cases. Mr. Justice Johnson points out the quarter whence it comes, in Gibbons vs. Ogden, where he says that "a right (on the part of the States) over the

subject (of foreign commerce) has never been pretended to in any instance, except as incidental to the exercise of some other unquestionable right." It is in consequence only, therefore, of the possession of some other powers by the States, and not of their having any power over the subject of foreign commerce, that the real difficulty arises as to the validity of their acts, bearing upon that subject incidentally. "It is no objection," Justice Johnson remarks in the same case, "to the existence of distinct substantive powers, that in their application, they bear upon the same subject. The same bale of goods, the same cargo of provisions, or the same ship, that may be the subject of commercial regulations, may also be the vehicle of disease. And the health laws that require them to be stopped and ventilated, are no more intended as regulations of commerce, than the laws which permit their importation are intended to innoculate the community with disease. Their different purposes mark the distinction between the powers brought into action; and while frankly exercised, they can produce no serious collision." He means, however, only by this language, that generally these separate powers may be exercised without collision—not as was said elsewhere, that "collisions must be sought to be produced;" for in that case, as in these, the collision was adjudged to have actually taken place without imputing either a design, or want of frankness to the State law-givers. Indeed, that presumption is never entertained with respect to legislative action; and yet it is one great purpose for which the high tribunal of the supreme court was instituted to decide anticipated conflicts between the laws emanating from the States and the Union.

Some other test, then, becomes necessary, besides merely the intention or purpose for which laws were enacted, in deciding upon their validity; and the principal test resorted to is to pass upon the effects which must result from putting them in force. It was by this standard that the laws of New York passed upon in Gibbons and Ogden, was adjudged void by the whole bench. And again, in one of these cases, it was upon this that another law of that State was held to be unconstitutional by the court; and, indeed, upon this test, so much of it as taxed citizens coming from other States, was held to be void by the whole bench.

To consider it in this point of view, its nature is analyzed, and its various qualities compared with those of other taxes, so as to see with which it is most properly classified. Thus, on one side, it is claimed to be similar to a poll-tax, or a tax upon ships as property and part of the capital of the owner, from which it is confessedly not exempt, though it is an instrument of commerce.

But these taxes are required to be paid by the master, owner, or consignee of a vessel, so much in the one case for each passenger, seaman, &c.; and by the other law, so much for each alien passenger. It differs from a poll-tax in the manner of laying it, in that the captains, &c., are charged with it not in the individual. It differs, also, in the considerations from which it springs. The poll-tax is usually a tax paid by a resident of the State, and is in consideration of the protection given the person for a certain space of time. The passenger-tax is for the privilege of coming within the territory where, if he remained, in due season, he would be subject to pay the other tax;

and the price paid for his admission, would not exempt him from paying the price of his residence. It is not analogous to the tax upon ships for a similar reason, that it is a tax over and beside that, paid upon the ship as part of the owner's capital. All such taxes, moreover, are paid at stated periods, as annually, and are not contingent upon events, as upon the arrival of a ship.

On the other hand, it is claimed to be similar to, if it is not in effect or actually, a tonnage duty. Being like it, in that it is a tax paid for the *use* of the ship; and differing only from a tonnage duty—strictly so called—in this, that it is a rate, graduated by the number of men actually carried, whilst that is a duty determined by the capacity of the vessel for carrying merchandize. It may well be doubted whether under the name of tonnage duty, it was not intended to include every sort of tax upon the use of shipping. The fact that there is a difference in the numbers actually carried, and the capacity of the vessels to carry, is not sufficient to distinguish a tax imposed according to the number, from one levied according to the capacity of the vessel for carrying, else a duty measured by the freight actually transported, might be distinguished from one rated by the capacity of the vessel for that purpose. The design of a tonnage duty is, in fact, only to put a tax upon the shipping business; and the mode of imposing it by the tonnage duty, is merely intended as a method of proportioning it to the amount of business done; and besides that, as the capacity of the vessel for carrying, furnishes a mode nearly enough approximated to the amount actually carried, it was a far more convenient and safe mode of assessment for the government.

Nor can this tax be distinguished from a tonnage duty by urging, that although it is paid to the collector by the captain, yet that it really comes from the passenger, being collected by him of the passenger, by way of increased fare; because the same thing, in substance, may be said of a tonnage duty; that may, with the same propriety, be called a tax on freight, as this can be called a tax on passengers; for both will, in some degree, increase the price to be paid by the use of the vessel, that embracing the charge for transporting, either of men or merchandize, as the case may be; these being the only differences between the taxes in question and a tonnage duty, the distinction would seem to be too immaterial to prevent them from being classed as essentially tonnage duties; and within the intent, if not the letter, of the prohibition in the constitution.

If this analysis of the nature of these taxes be fair, the conclusion arrived at is more direct and satisfactory to the mind, than the similar result which is arrived at by considering whether these taxes do not amount to a regulation of commerce which conflicts with the regulations of the United States, and for that reason, are void; although, being passed in virtue of the taxing power of the States, and operating only incidently on commerce, they would not be void except for their conflict with the regulations of trade, which Congress has passed. But from what has already been said respecting the nature of regulations of trade, it follows, that it cannot be expected that such a conflict can be shown any otherwise than by adducing the fact that the States have put conditions upon what Congress has left without con-

ditions: that what Congress allows to be free, the States have interposed to subject to a tax—to which it could be replied, that although such is the effect of the tax, it is a mere incident: that it has been decided, in the license cases, that it is no objection to State laws that they have an incidental effect of restricting importation, &c.: that it is manifestly the only object of these taxes merely to raise revenue; and not to modify the course of trade, &c. And although this reply may not avoid the difficulty which is felt respecting the danger of allowing a tax, merely because of its small amount, for it would seem to follow, that if these amounts were permissible, larger amounts would be also; and if larger, how large might they not be, or where would the limit be found? It might be answered, that the limit would be where it was obvious that the effect was more a commercial regulation than a tax. But that would be a matter of fact about which, from its perplexing nature, it would be difficult to have a decided opinion.

It was in view of such difficulties, no doubt, that the taxing power of the States was so carefully restrained on those subjects through which it could affect commerce.

It would be manifestly impossible to say, in such cases, where the tax ended, and the commercial regulation began; and where one or the other preponderated. Nor would that even settle the question effectually; for it might still be contended, as it still is, that it did not preclude the States from using their undoubted power to tax, in whatever degree its results might interfere with the commercial power and regulations of the Union.

That, however, is not the position which Chief Justice Tanney, and the other Judges who dissented from the judgment of the court in these cases, occupy. Indeed it is manifest, from considering one of the positions taken by these members of the court, that the difference between them and the court, is merely as to the degree of interference effected by these laws with commerce; and I think it can be shown, from that position, that the laws in question, ought to have been adjudged invalid, on the ground of such interference.

The position to which I refer, is the admission that so much of the law of New York as imposed a tax upon citizens coming from other States, was invalid and unconstitutional. The reasons given for this opinion by Chief Justice Tanney are, that "living, as we do, under a common government, charged with the great concerns of the whole Union, every citizen of the United States, from the most remote States or territories, is entitled to free access, not only to the principal departments established at Washington, but also to its judicial tribunals and public offices, in every State and territory of the Union. And the various provisions in the constitution of the United States—such, for example, as the right to sue in a federal court, sitting in another State; the right to pursue and reclaim one who has escaped from service; the equal privileges and immunities secured to citizens of other States; and the provision that vessels bound to or from one State to another, shall not be obliged to enter and clear, or pay duties—all prove that it is intended to secure the freest intercourse between the citizens of the different States. For all the great purposes for which the federal government was formed, we are one people, with one common

country. We are all citizens of the United States; and, as members of the same community, must have the right to pass and repass through every part of it, without interruption, as freely as in our own States; and a tax imposed by a State for entering its territories or harbors, is inconsistent with the rights which belong to the citizens of other States, as members of the Union, and with the objects which that Union was intended to attain. Such a power in the States could produce nothing but discord, and mutual irritation; and they very clearly do not possess it."

It will be necessary to analyse briefly the considerations presented in this forcible array, in order to ascertain what are in fact, the controlling considerations presented. In the first place, it may be said that the free intercourse which seems so necessary to have been guarded by the constitution, can scarcely be said to be so, by the specific provisions referred to by the Chief Justice; that is, the right to sue in the federal court of another State; the right to pursue and reclaim one escaped from service; the equal privileges and immunities stipulated for as to all citizens; the right to visit public offices at Washington; and provisions against subjecting vessels to duties, or obliging them to enter and pay, when bound from one State to another. All the intercourse which would be protected by these provisions, might be excepted from taxation, and yet leave the great bulk of it subject to taxation. Indeed that which might be excepted would be very inconsiderable in amount, compared with what would be left subject to taxation; and it would be the least plausible answer to the objection, that if the States had such power, they might throw obstacles in the way of fulfilling these provisions of the constitution, to say that the provision in reference to the equal immunities of citizens of the United States, would prevent the States from ever making the tax very burdensome, or sufficiently so to throw any serious obstacle in the way of such intercourse, because the tax must be the same upon their own citizens, who would practically feel it most, and they would therefore take care that the tax should be moderate.

But, even so regulated, this is a condition of things which the Chief Justice truly says, is not reconcilable with the great objects, and when it is recollected that even in the articles of the confederation, provision was made for free intercourse for all the white inhabitants of the several States, it would be remarkable that the constitution, which was to usher in "a more perfect union," should have wrought a change from free to restricted and taxed intercourse, and yet, such an oversight which would admit of this, might be imputed to them, if no other provisions than those quoted by the Chief Justice had been inserted in the constitution to guard against such taxation.

Is there, then, a provision in the constitution which affords a surer guarantee for general free intercourse, than that which flows from the inference that it must be intended that citizens should have access to the departments at Washington, and to the federal courts in the several States, and the right to recapture slaves? Is there not a more comprehensive subject than either of these, devolved upon the general government, and one which draws with it far more of the intercourse of our people? What is, in fact, the principal thing comprehended

"in the great objects for which the federal government was formed," and with which the Chief Justice says it is inconsistent that the States should possess such power? Those who are familiar with the operations of the government, recognize at once, that it is incompatible with its objects and workings that the States should possess such a power; but a legal argument requires a statement of the precise objects referred to, and the particular clauses of the constitution by which the General Government is charged with them. That it was intended to secure intercourse against State restriction by the constitution, may be presumed from the fact that its great object was to make "a more perfect Union," than existed under the confederation, in which nevertheless, it was stipulated that "the people of each State, shall have free ingress and regress to and from any other State, and shall enjoy therein all the privileges of trade and commerce, subject to the same duties, impositions, and restrictions, as the inhabitants thereof respectively." And we would also look to find the provision in the new instrument in the same connection as in the old, that is to say, among these provisions respecting to trade and commerce, which was then, as it is still, the object of nearly all the intercourse of our citizens. But we do not find any such express stipulation in the constitution, and the reason is, because the States no longer hold power over the subject of trade and commerce between them, but having ceded the control of the whole subject to the General Government it was unecessary to stipulate respecting its parts. Under the confederation it was otherwise, the General Government was clothed with parts only of that great power, and it was very proper under such an instrument to stipulate the privilege in question. But the confusion, animosities, and embarrassments in trade, growing out of the possession of this power by the States, having lead to the formation of the new constitution, in which the whole of it is conferred upon the General Government, with every precaution as we have seen against future intermeddling by the States, it was no longer proper to stipulate against restriction of intercourse by the States, as when the power over commerce was divided between the two Governments; and it was therefore necessary to mark the limits of the powers of each.

If it were not settled by the decision of the Supreme court, and the writers upon public law, that the control over the intercourse of persons was included in the power over commerce, what I have just said would warrant that construction of our constitution. For it appears that in connexion with the stipulations respecting commerce, contained in the articles of confederation under which the States retained the general power to regulate commerce, that they were restricted from making any regulations to prevent free intercourse between the several States. But, that when the general power on the subject was transferred to the General Government it was not thought necessary to insert the restriction upon the States. It was thought to be a good precaution to forbid expressly the use of the taxing power as respects the objects or things which were the subjects of foreign commerce, to avoid litigation among citizens, and conflict between the Governments. But intercourse of persons, it seems, was thought to be

so closely connected with the subject of commerce that with the transfer of the control of it to the General Government it was not necessary to forbid the States to restrict, or tax it, as it was to forbid them to tax imports and exports, and tonnage.

Now it may be enquired if it is thought that by force of the transfer of power to regulate commerce among the States, the States were stripped of all power to tax intercourse between them, does not the same thing follow respecting foreign intercourse upon the transfer of the power to regulate that?

It has been already remarked that the intercourse rendered necessary under the provisions of the constitution, referred to by the Chief Justice, was insignificant in amount, compared with the whole amount which takes place between the States; and it is necessary in order to protect the great branch of this intercourse to consider what are the provisions of the constitution which were made to further the great objects of the constitution with which, he says, this tax is inconsistent. If we refer to the history of the constitution the remark will be acknowledged to be just, that "over whatever other interests of the country this Government may diffuse its benefits and its blessings, it will always be true, as matter of historical fact, that it had its immediate origin in the necessities of *commerce*, and for its immediate object the relief of those necessities by removing their causes, and by establishing a uniform and steady system." And this was the agency adopted to bring about the blessings recited in the preamble of the constitution, as the ultimate object for which it was established; and it has been, and is, in fact, the means by which those objects have been, and will continue to be promoted, more than all others whatsoever. Indeed every other agency is but secondary and dependent upon it, and it is with this, therefore, that the laws in question interfere. It is connected with this that citizens of the different States, want access to the Federal courts in other States, and want their vessels to land without being required to enter, or clear, or pay duties; and it is for this that nearly all the vast crowd which is constantly traversing our extended country require unrestrained access to every part of it. It is impossible to suppose that this immense intercourse, the direct and indispensible opening of an extended commerce, should have been overlooked by the framers of the constitution, or left dependent upon provisions in the constitution, not connected with the subject of it for protection.

Upon analysing the reasons of the Chief Justice, assigned for holding the provision of the law of New York which imposes a tax upon the intercourse of citizens to be invalid, they are found to be really only another mode of stating that the law interferes with the provision which confers the power over commerce upon the General Government, and that being so, the reasons which invalidate it as to citizens applies to other persons, and extends to foreign, as well as to intercourse between the States.

But it is thought that these laws may be sustained in virtue of what is called the *police* power of the States—the term being used in the mere restricted sense—under which they have the right to protect themselves against paupers, vagrants, criminals, refugees &c., and also

against the introduction of disease. This is, in fact, merely invoking the same power as that under which the argument was made to sustain it as a tax. In that it was attempted to sustain its application to the subject in the way of taxation; in this in the way of regulating the subjects of pauperism, &c. In this last connection it is made to bear upon slavery, and the State laws in relation to slaves, and the race from which slaves in this country are derived. This gives somewhat of a political aspect to the case, and much of the feeling manifested in the opinions are due to this circumstance. This gives greater earnestness to the controversy than the consideraions which I have noticed. For though the power to tax, for the sake of revenue, is desirable, the power to exclude, (which, it is maintained, is dependent upon the power to annex conditions to the admission of) certain persons is of far greater moment to the States. It is said to be of indispensable necessity, that some of the States should have the power of excluding certain persons, as free negroes, in order to maintain domestic tranquillity—whilst it is equally necessary, to all, that they should have power to prevent paupers, convicts, &c., from settling within their territories; and that hence, the admission of any person, whatever, except citizens of the United States, depends upon the will of the State, and that, having the power, from these considerations, of excluding, they may prescribe such conditions, either in the shape of sanitory regulations, or pecuniary payments as the States think proper to impose.

The provision in the Constitution, which forbade Congress from prohibiting the migration or importation of such persons as the States chose to admit, prior to 1808, it is contended, applies to slaves only, and used both the phrase *migration* and *importation*, in order to apply to them in their character both as property and persons. It was intended by that provision merely to limit, for a period, the power of Congress over commerce, under which, if not srestrained, the slave trade might have been, and no doubt would have been forthwith abolished. And as that was the only sort of persons that it would have been desirable to refuse admission to, at that time, it seems a reasonable construction of the language. The word "slaves," was not here, nor any where else in the Constitution; because there were many members of the Convention who would, neither expressly or impliedly admit that one human being could have property in another, for a moment. They would not, therefore, use language which, by one construction, might be thought descriptive of the *actual* relation—might, by another, be supposed to recognize its legality. This was, perhaps, unnecessary delicacy, but it is characteristic of the men of that era to scruple at the remotest approach of what appeared to them as sinful.

This branch of the subject raises the questions of the greatest difficulty in these cases. It is undeniable that, the States possess power to protect themselves against paupers, convicts, &c, the power to prevent the settlement and impositions of such characters upon a community is inherent in every government. This belongs to even lesser communities than States. It is recognized as possessed by counties, parishes, hundreds &c., but it was never attempted to exclude persons generally, in order to prevent the settlement of paupers.

But it does not follow that the States may tax those whom they admit, even upon the supposition that they have the power of determining who shall, and who shall not be admitted. The reasons on which the power to exclude is rested, do not extend to the imposition of taxes upon those who are admitted by the States. But having made use of them, to maintain the right to exclude, it is then said that this power of exclusion involves the lesser one of taxation. But this does not follow, any more than the power of preventing the landing of ships or goods under quarantine laws, which the States possess and exercise, gives them the power of exacting a pecuniary consideration as the condition of landing, in such cases. If it is argued in one case, that as they have the power to exclude altogether, they may determine for themselves what is a sufficient inducement for them to waive such right, and if they shall think a pecuniary payment a sufficient indemnity for the injury which they receive by the admission, there can be no objection to an arrangement which accommodates the emigrant, and satisfies the State; so it can be argued in the other, that as the State has the power of excluding ships and goods temporarily, for certain reasons, it is in their discretion to determine the circumstances under which it shall be exercised. They may, therefore, apply to all cases, and subject all ships and goods to quarantine, except such as shall pay a sum of money which will indemnify the State for the supposed injury inflicted by their admission. And although, in both these classes of cases, we may suppose that laws might be passed by the States, which would be within their acknowledged powers, which would interfere with the grants to Congress, there never can be such a state of things in point of fact. We might suppose, for example, that under the power to exclude, all persons might be excluded, and that under the quarantine power the time might be made so long as practically to exclude all ships and merchandize. But no such things can take place in fact. On the contrary, we have the sure guarantee of interest, that neither of these powers will ever be exerted so as practically to interfere with the General Government, or to incommode commerce to any degree; but, on the contrary, it will only be used for its advantage. For, whilst it is indispensable to the health, morality, and safety of the people of the States generally, that they should exercise the power to exclude paupers, convicts, diseased and dangerous persons, there are no pursuits which so much require this protection as commerce.

But there is no such guarantee for the use of the taxing power, in respect to the transit of the men, or merchandize employed in foreign commerce. This is proved by the great fact that, by the common consent of the statesmen of that day, it was indispensible that the confederation should be superceded by an instrument in which this power should be yielded up by the States. If their own interest had been sufficient then to prevent them from such use of the power to tax commerce as would prove hurtful to themselves and the other States, the constitution would not have been adopted, probably. But it was not, and that argument, now used in reference to passengers or intercourse, is no better now than it was then. The great reason why discretion may be allowed them as respects the extent of exclusion under both quarantine regulations and police laws, against paupers,

convicts, &c, and no discretion can be allowed in the way of taxing trade, either by putting the tax in the shape of one on ships, that carry men or carry merchandize, or upon the men or the merchandize employed in trade, is because, in the one case, there is no temptation to abuse the power, and in the last case there is such temptation.

This view of the subject is not presented in either of the opinions delivered in these cases; but, in addition to its reasonableness, it is sanctioned expressly by Justice Johnson, in the case of Gibbons *vs.* Ogden, p. 231. Whilst he maintains the power of Congress to be exclusive, on the subject of commerce, and that it comprehends intercourse, giving thereby to Congress the general power over ingress and egress of persons, he qualifies this by saying that this right does not extend to the admission of those whom the States may think proper to exclude. I think, therefore, that this may be the true ground on which to put this question, and that all the powers essential to securing the States against the evils dreaded from convicts, paupers, free blacks, &c., are within the line laid down by Justice Johnson. Whilst it assigns to the Union the entire regulation of commercial intercourse, and secures it against State interference and taxation.

It is easy to see, as has been said above, that the reasoning by which the power of excluding certain persons is shown to be necessary to the States, does not uphold the claim to tax commercial intercourse, and therefore that there ought to be a mode by which they might be permitted to exercise one power, without trenching upon the other; and the distinction taken by Justice Johnson seems to point out a satisfactory and practicable mode for attaining this end.

The discretionary power to exclude classes and castes, and that of taxing general intercourse, even if lodged in the same sovereignty, would be regarded as proceeding from distinct heads or sources of power; and though, when lodged in different sovereignties we may imagine cases of conflict, yet, practically, conflict will never arise. But, even on the supposition that these powers had a common source, and that the possession of one implied, ordinarily, the possession of the other, and that the States are admitted to possess the power of excluding such persons as they think proper from their territorial limits, in order to enable them to protect themselves against paupers, convicts, &c., yet it might be that the subject of ordinary intercourse, that which is not prohibited, was excepted from State control, and was committed for regulation to another sovereignty, either expressly, as the power to tax imports, &c., is expressly excepted from the power of taxation by the States, although the general power remains; or it might be impliedly excepted, as belonging also to another class of powers which were devolved upon a superior government. Thus we have seen that whatever may be thought of the propositions, that the power to exclude resides in the States, and that this power involves that of prescribing conditions for ordinary intercourse, such intercourse undoubtedly belongs also to the subject of commerce, and was committed for regulation along with that subject, to the general government. That it has, in fact, legislated, and also regulated with foreign governments in reference to it, and must necessarily, therefore, be excepted from State control or regulations; nor do the equitable considerations which have

been argued in favor of the propriety of these causes seem any better founded in my view of them than the legal argument. It is said that emigration which goes on through these ports, brings a great burden upon these communities in the shape of paupers, and that it is proper that a tax should be laid upon it, in order to provide means for the maintenance of paupers. It is an answer to all this to say, that no objection is taken to so much of the Mass. law as provides against the landing of paupers, and requiring security for the charges they may put the community to. This provision is no doubt sufficient for the purpose of protecting the States from foreign paupers. The remaining provisions which impose a tax, can scarcely be intended to support persons who are excluded or provided for by the previous provision. But this is justified on the ground of its being a provision against the contingency of some of those becoming paupers who are not so when admitted, and do not become so within twelve months, and it is right to get money from them when they have it, so as to take care of them when they have it not. Now this is not the case put in the argument as there presented, provision was sought against actual paupers, sent in shiploads from foreign ports to the ports of the Union—not people who were able to take care of themselves for twelve months, and who might then become paupers. With respect to such emigrants, there was manifestly no force in the appeal, and no ground for the alarm that our sea-ports were to be overrun with foreign paupers, emptied upon us by the authorities of Europe; for, as a general thing, those who were able to provide for themselves for twelve months, would not become chargeable upon the public thereafter; and when it is considered that the vast emigration which takes place through these ports, is emigration to the United States, and destined chiefly, not for the cities of New York and Boston any more than for Nova Scotia, or other places at which they may happen to touch, but for the western portion of the Union, the propriety of a mere temporary provision against their becoming a burden on these cities, and the impropriety of taxing them for the mere privilege of passing through them, is still farther manifested. This view of the subject shows, also, the equal propriety of considering these ports, as ports of the United States, as well with reference to the persons who pass through them on the way to more remote parts of the Union, as with reference to the merchandize which is imported through them; for it is probable, that of the persons landed in these places, the proportion that remains in them, is less than of the goods imported, which shows that the same general reason exists for exempting both from paying the local government for permission to land.

ART. IV.—COTTON MILLS BY COTTON GROWERS.

The following able article, from the pen of S. R. Cockrill, Esq., of Tennessee, was published a short time since in the Nashville Banner and Whig, over the signature of "A Planter:" but, encouraged by the approbation of the press, the author transmitted to us a copy with authority to publish it in connexion with his name, if we should es-

teem it worthy of a place in our Journal. The scheme of locating the spindles at points most convenient to the fields, and operating them with slave labor, is in our opinion the true policy of the south. The same degree of common sense that dictated the separation of the fibre from the seed, before shipping it to market, plainly indicates the economy of spinning it into yarn, and weaving it into cloth. This branch of the subject is so well illustrated by the author that we shall make no attempt to improve either his facts or arguments.

But his suggestion in respect to the amendment of the constitution, so as to authorize the levying of an export duty on raw cotton, is so novel, and startling withal, that, we should require much time for reflection before we could assent to such a proposition. There can be little doubt that, such a measure, if adopted, would force upon the south a policy that would not only greatly increase the value of her real and personal property, but more than double the value of her annual products; and hence, we are not surprised to meet with this suggestion from a southern planter. But how other portions of the Union would be affected by such a measure is a question of much delicacy and difficult of solution. Will the non-slave holding States aid in establishing a policy which is calculated to place the slave labor of the south, with all its advantages in competition with their free operatives? Besides, in our opinion, there is no necessity for such a measure. The south needs no protection in respect to the manufacture of coarse fabrics, which constitute much the larger portion of the consumption. Let her erect the machinery, a thing doubtless within her power, and give her time to train her operatives, and she can, and will stop every spindle in every other part of the earth, that is used for spinning coarse yarn. Cotton spinning is steadily growing into favor in the south; and a few years of experience and observation, will effect a revolution in southern economy, which will be as complete perhaps, as any that could be achieved by a change in the constitution. A general law of the respective States, authorizing the formation of manufacturing corporations, is, in our opinion, the only legislative action which the south needs in respect to this subject.

When the south gets fairly under way, the people of the United States will soon spin, and weave, all the cotton that our country can produce: and long before the close of the present century we shall become large importers of raw cotton, from South America, and other parts of the world.

COTTON MILLS BY COTTON GROWERS—EXPORT DUTY ON RAW COTTON—PRICE OF COTTON.

Cotton is the leading and controlling staple of the South, embracing nine States of the thirty, of the United States, and therefore worthy of consideration and study, by all who feel an interest in the prosperity of this end of the Union.

For seven years past, the labor of cotton growers has been sacrificed, and the prospect of a fair remuneration for the growing crop, will pass away before another comes into market; leaving the future as a counterpart of the past, with a tendency to get worse unless a remedy be applied.

The only safe and substantial remedy, is to put up the *cotton mills* among the cotton fields. The great bulk of the crops, when put into market, is classed as "inferior," "ordinary," and a small portion as "middling;" and these classes have not averaged to the planters, more than six cents for seven or eight years past, and some crops have been sold during this period as low as four cents per pound.

A continuation of these prices, will soon create a necessity for a remedy, for these low rates, which are not a compensation for the immense labor required in the cultivation of cotton. Under the present plan, the planters labor, composed of "the sweat of his brow," and the substance of his soil, baled up as *raw cotton*, is shipped off annually, four thousand miles to cotton mills, in foreign countries; but chiefly to England, at an expense of eight or nine dollars per bale, which is charged to the grower, when the account of sales is furnished from the mill.

If this tax, to get to mill, was the only evil, it might be yet endured for a while, but there is, in reality, but one great cotton mill, and that belongs to England, and her agent sits at Liverpool, and sees our labor, in bales of *raw cotton*, piled up around him, till it will cover a ten acre field. The reports of that market will show a stock, sometimes of a million of bales, then stored in Liverpool, unsold, with a knowledge of the fact that it cannot be taken any where else. The grower has no remedy. *There* are the *spindles*, and *there* it must stay; and the agent of this tremendous English mill says, "I will pay you three and a half pence per pound for your cotton," and it is sold. An account of sales is sent to the planter, in £. s. d., in red ink, with double entries, and when translated into English, he finds that his part is four cents per pound.

Cultivators of this great staple, know that such prices are no compensation for the immense labor required in its growth. They know it is a *sacrifice*, which looks to ruinous consequences, because the substance of their lands is annually wasting away by continued cultivation.

The remedy which is now insisted on, is for the *planters themselves*, to "resolve" that the cotton mills shall be brought to the *cotton fields*. That they have been paying toll to the English mills long enough.—Make the *resolve*, and the ways and means will be readily pointed out for effecting the end proposed. The cotton fields of the United States, extending from the Atlantic to the Rio Grande, embrace in their wide extent, 500,000 square miles. The interest of *all planters* in this great cotton field is the same. State lines are imaginary, when the sacrifice of cotton growing labor is the question, and old issues in politics may rest in forgetfulness, and the whole South may act as one State, in giving a prosperous direction and division to the labor of the best trained, most efficient, and regular force of workers, on the face of the globe. This splendid force of laborers, if directed by skill and

wisdom, will yet make brilliant the prospects of the southern end of our Union. But a part of this force must be taken from the soil and put into the mills.

The spindles and looms must be brought to she cotton fields. This is the true location of this powerful assistant of the grower. In the *West*, in the East or in the North, would be better than any foreign country; but the best location is the sunny South, where the cotton grows. The next best location, is in the provision regions nearest the South.

To fix the public mind on the importance of this change, its necessity indeed, and to compel planters to investigate it, it is proposed, that they, as a body, petition Congress to propose an amendment to the 9th Section of the 1st Article of the Constitution of the United States, which prohibits a "duty on exports from any State," and when amended, that they pass a law, that $5 per bale be paid into the Treasury of the United States, upon all *raw cotton* shipped after the year 1860.

This would be evidence of a determination among them, and ten years' notice to the world, that they would no longer go four thousand miles to mill with their cotton.

An average crop now of the United States, is about 2,300,000 bales, which at six cents, is $55,000,000. The estimated cost of spinning and weaving a pound of cotton is three cents, making two yards to the pound, equal to eighteen cents per pound, at nine cents per yard for osnaburgs. The crop, then, when spun and wove, is worth eighteen cents per pound, making $180,000,000, allowing ten per cent. for waste, instead of $55,000,000, the yield *now*, when sold as *raw cotton*.

The inequality between the labor and capital for growing, and that of spinning, is startling. A pound of cotton, plowed, hoed, picked, ginned, baled, spun, and wove, is worth eighteen cents. The spinning and weaving, it is said, can be afforded for three cents cost, which would leave fifteen cents per pound for the labor of the planter, supposing the cotton-mill in the cotton-field, and the mill to get cost only. But as three cents may be too low an estimate, make it six, and then twelve cents is left for the planter. But now what does he get?—four, five, and six. The question may now be asked, who gets the balance, allowing six cents to the grower, and six cents to the spinner, there will be six cents yet unaccounted for? It goes to pay warehouse charges, freight, insurance, drayages, storages, weighages, *pickages*, pressage, commissions, postage, bills of lading, exchange, freight to Liverpool, dock dues, freight on railroad to Manchester, and then it is at the mill; and the same process brings it back—and this will fully account for the six cents per pound. Who pay these charges? The grower

The growth and production of cotton are accomplished by the muscles of men and mules, laboring incessantly eleven months in every twelve; exposed to heat, to cold, to winds, and rain, and to the malaria of swamps.

The spinning and weaving are done by the iron muscles of the spindle and loom, driven by the never tiring engine, waited upon by boys and girls; and this labor is under roof, certain as to *quantity*, free

from overflow, from frost, from caterpillar and boll-worm. This simple statement is evidence clear and strong, that it is the grower's labor that is now sacrificed, and greatly sacrificed. A firm and determined resolution among the planters, (for they are the men who are suffering, and they must act for themselves,) can arrest this policy in a few years. An export duty on "raw cotton" would ensure it; but it may be accomplished without it.

Having determined that the mills must come to the *cotton*, which is but one move, whilst sending the cotton to the mills, is a heavy annual, perpetual tax, it is proper to enquire if cotton growers can get up the spindles and looms among the fields.

The following facts answer the question in the affirmative, most distinctly. We estimate the crop at 2,300,000 bales. The factories now in the United States, require of this, 600,000 bales, leaving 1,700,000 for the south to spin. This would require three hundred and fifty mills, with ten thousand spindles each; or seven hundred mills, with 5,000 spindles; or 3,500,000 spindles.

COST OF SPINDLES.

3,500,000 spindles, with all machinery necessary, looms, &c., at $12 each, - -	$42,000,000
700 engines and fixtures at $8,000, - -	5,600,000
Other expenses in about the machinery, -	5,000,000
	$52,600,000

The machinery, if all purchased in one year, would cost about fifty million dollars. This is the only debt of importance necessary to be made; and its payment can be extended into ten instalments, of five million dollars each, interest added. The difference in the income of the cotton growers when they become spinners, is so great that this debt would never be felt. The 1,700,000 bales intended for the cotton field spindles, now yields an income of $40,000,000 at six cents. The same cotton, spun up by the creation of the above debt for these iron muscles, will give the same growers an income of $120,000,000—less the cost of spinning and weaving, which would give an increase of net gain per annum, nearly equal to the cost of the machinery.

One mode here suggested, is for planters, provision growers, and mechanics, of all the cotton States, to send in petitions for manufacturing companies to be chartered, upon application to the Legislatures of their respective States; and also to pass an act for a general charter for all persons who may associate together for manufacturing furposes, so as to avoid partnerships, and limit the liability of stockholders to the loss of their subscriptions as stock.

Spinning may be commenced with any number of spindles—with or without looms. There is an extensive demand for cotton yarns, and thread is a saleable manufacture. The mills at Lowel average about 6,000 spindles for each building. There is one, however, at Salem containing 30,000 spindles—the largest in the world, under one roof. The size of buildings, then, will depend upon the quantity of machinery intended to be worked. A mill for 2,500 or 3,000 spindles, for coarse goods, will require, perhaps, three rooms twenty-five by sixty feet

long, and a plan suitable for the *cotton field system*, which will be in the country, and where land costs nothing, and manageable by slave labor, at comparatively, *no cost*, is for fifteen planters to take $4,000 each in stock, select a site for the mill near their plantations, detail three men from each, making a building force of forty-five men, besides an overseer and a general manager, one of the stockholders. With this force, and as many teams as may be necessary, they will proceed to put up three rooms of twenty-five by sixty feet, of wood, one story high, of coarse, strong, undressed lumber, such as they can readily prepare from the forest, without any outlay of capital. Add, at convenient distances, fifteen or twenty cabins, and the buildings for the mill are up. This wooden, one story plan, for the cotton field, possesses the advantages of costing nothing, of fixing and running the whole machinery upon the ground, making it more steady, and accessible, and avoiding wear and tear, with better ventilation, less noise, and, perhaps, less risk from fire; because it is not the walls of a mill, but the cotton about the machinery, which is subject to burn.

One story rooms, running in different directions from the engine, of wood, and without much labor in its preparation, are offered as a substitute for the four story brick and granite palaces of England and of New England, which are required to be built with thick walls, to avoid motion in the machinery, and therefore expensive, costing from $30,000 to 50,000; and when buildings for the operatives are finished, the bills are often $100,000 in a site and buildings, before a wheel is turned. Whilst the manager and overseer are putting up the wooden mill and cabins, the planters, acting under the charter, have issued their bonds for $40,000, bearing seven or eight per cent., interest payable in three, four and five years, in equal instalments, and secured the payment by mortgage on the site and machinery, and a half section of land each; have sold the bonds, and bought the spindles and engine, and are ready for operation in six months from the formation of the company. A man and four boys or girls are taken from the plantation of each stockholder and put in the mill, each getting credit according to the number furnished. These, with eight or ten trained hands as instructors, furnish a mill force which will spin and weave 1,500 bales of cotton; making a million of yards of osnaburgs worth nine cents per yard, equal to $90,000 gross sales. The stockholders being planters and near the mill, furnish provisions, cotton, and wood for the engine.

Suppose the planters who have put up this mill, make 1,500 bales only of cotton, which at $24 are $36,000. Since the erection of the mill, the same cotton is worth $90,000 per annum. At the end of three years, they commence paying the debt for machinery by instalments, and before this the hands are trained to their new employment, and the planting account is raised from six to ten cents a pound for the *field labor*, which had been heretofore shipped off and lost. The mortgage debt is $2,666 each, being fifteen planters associated, to be paid in three instalments of $888, with interest, and that, when they are getting for their field labor, ten cents per pound. What then would be a debt of $1,000 a year on substantial planters, when they have insured ten cents a pound for their crops, by incurring the debt.

There are nine cotton States, including Tennessee, which will average about sixty counties to the State. Two mills in every county, of 3,000 spindles each, are sufficient to spin the whole crop, and render the south magnificently rich, and gloriously independent. I mention these facts to show the immediate capability of the cotton growers, to relieve themselves from this blighting system of shipping off the soil in *raw cotton*, and bringing home nothing in return, comparatively speaking. There are twenty counties in Tennessee, South Carolina, Georgia, Alabama, Mississippi and Louisiana, and a less number in Florida, Arkansas and Texas, which can spare the force to erect the buildings and cabins, for ten such mills, in any one year, and make the usual cotton crops besides.

Steam is a regular, portable power, free from freshets, droughts, and mill ponds, and can be commanded at will for 300 days in the year, in any desired quantity, suited to small or large operations. Two sections of land, affording twenty cords of wood per acre, which is a low estimate, will drive an engine for 3,000 spindles, for eighteen years. This also shows that there is a permanent source of power in the cotton States, even when nature has not furnished either suitable streams, or deposited in the earth beds of coal; in some sections, however, both are found. The difference between the cost of water and steam, is but one item, and that not large, but the only difference now is that of wood and coal — steam power is now considered as cheap as water, all advantages estimated. Among the fields a site may be often selected, near enough to enable stockholders to haul the seed cotton directly to the mill, the most desirable condition for the mill work. Thus saving the labor of ginning and baling, the loss on bagging and rope, commissions for buying cotton, and freight; beside saving the work of the picker at the mill.

Cotton growers who have owned slaves long, know they are capable of making efficient operatives; and when once learned, they are fixed, permanent, and valuable. This branch of the business furnishes profitable employment on cotton, to a portion of the field force, which relieves the soil, to that extent, which is now wasting away, from over fatigue. It gives scope to all the mechanical talent among the slaves, both males and females. Men in the machine shops, and women among the mules, throstles, and looms. The condition of the States now, is dependent; that is not the true position of the chivalrous south. A war with great Britain would prostrate them at one blow. The revolution in France was like an electric shock, though she had but a few cotton mills. The starvation in Ireland, that right isle of the ocean, puts *down cotton*. The bank of England, even can and does press down the price of "*raw cotton*" at Liverpool; and its recoil falls back on the grower. This dependency is unmanly, and does not belong to the American character. The angry ebullition of emancipation sympathy for the happy slaves of the sunny south, among our own northern and eastern friends, is sometimes a source of a moment's uneasiness, in consequence of our dependent condition and the repeated sacrifice of our field labor. These dependencies should be forthwith severed, by a determination to put up the cotton mills among the cotton fields, and spin and weave by slave labor.

This is the certain, safe, and sure remedy for all the *evils* enumerated above, bringing bright prosperity, humanity, with enlarged sympathies, and an ameliorated condition of the great working force of the south in its train. Their labor, thus skillfully directed, would increase rapidly the nett income of the growers, and slaves take the condition of their owners. Give them large incomes, and you make the negroes rich. As a general rule, (some exceptions, I regret to say,) rich owners have rich slaves.

The true character of the black man in servitude is not understood, except in the south. Negro society, with its amusements, and sources of enjoyment, is not organized anywhere else, to the same extent. They are born in servitude, and so were their fathers and grandfathers, and a long line of ancestry, and they have never known any other condition, and but few ever desire to change it. The body is accustomed to daily labor, enured to it from early youth, and it is a habit of his life. The mind is not called into action. They are relieved from all the responsibilities, sufferings, and mental anxiety of freemen, amenable to the laws of the land, and the rules of society.

Out of the general fund, they are fed, clothed, and housed; and medical aid and attention, and care, are furnished when sick. Among them there are no widows, or orphans thrown upon the charity of others; no paupers, and no lunatics; no painful anxiety for the future welfare of their wives and children; for a home and a competency are left for them when they are dead and gone.

It is the duty of their owners to bring to the aid of this available and efficient corps of regular laborers in the field, the steam engine, and the iron muscle of the spindle and loom. With these implements, they can put the labor of the field into a consumable shape, which leaves the world open as a market.

No longer will they pile up the cotton bales around the English mill agent at Liverpool, and suffer it to be sacrificed, because they have no remedy. There will be a demand for coarse, heavy, cheap cotton goods, as long as there are laborers in the world to wear them; and in this shape, the great bulk of cotton crops will be consumed. Europe can continue to make the fine goods, in which the raw material is no part of the cost; one pound making twenty yards of fine muslins.

South America, Asia, Africa, and the East and West Indies, grow about 470,000 bales of fine cotton, well suited for fine fabrics. This supply, Europe could still convert into fine fabrics. New England to make prints and all other three to five yards goods, and the cotton fields in the sunny South, in a warm climate, can work up the bulk of the crop into coarse heavy goods, which will average not exceeding two yards to the pound. This system, put into operation, would yield to the Southern States, for cotton alone, $150,000,000, and supply the spindles now up in the United States. What effect such an income, in imports or money, would produce upon the trade and commerce of our Southern cities, is suggested for reflection only at present.

Large bodies move slowly; and to insure this result, I suggest an export duty of $5 per bale on "raw cotton." Corporate companies by growers and all others. The cheapest buildings will answer the

purpose. Buy the machinery, and mortgage whatever may be necessary to raise the funds, by sale of bonds at par. Spin and weave by a part of the field force. Do this, and the fortunes of cotton growers are fixed on a permanent foundation, promising accumulated wealth to the whole South.

The iron establishments in the United States, and the machine shops generally, may look to the South as an extensive customer in a few years. It is, no doubt, the true policy of the South, now, to order the machinery mentioned, worth $50,000,000. This must go to the iron establishments, and the profits might be taken in stock in some of the best mills, and thus lessen the outstanding liability for machinery.

The mild, warm winters in the South, are favorable to cotton spinning in cheap buildings. The passage of the Export Duty Law, would turn the eyes of all spinners and weavers in Europe, upon the South, and the country would be benefitted for a while, by employing them, until the raw force is trained. These suggestions are made for the study and consideration of cotton growers.

S. R. COCKRILL.

COTTON MILLS IN THE COTTON FIELDS—SAVINGS AND PROFITS BY MANUFACTURING AT HOME—SLAVERY—CAPITAL IN COTTON GROWING.

Public opinion is turned to the subject of Cotton Manufactures in the West and South, and is looking to all suggestions and statements of facts concerning them with interest.

The capital engaged in growing is a large one, not less than $700,000,000. Covering an area of 500,000 square miles, including all Texas, which is large enough for six States, the size of Tennessee, and when subdivided and each State thereof, shall be represented in the Senate of the United States, the institution of Slavery will have a full share of votes in that conservative body.

In the growth and expansion of our wide spreading Republic, this accession may become material, and the prospect of it may serve to quiet the nerves of the timid on that question.

The destination of the black population is South West. Their progress westward for the present will be checked by the Rio Grande. At a subsequent period, which many now living may see, they will be carried through Mexico to the Isthmus of Darien. This is to be the great outlet, and will avoid the evil of too great a number being found in any one State of our confederation.

This suggestion is made to point out a remedy for disposing of the increase of slave population for the next 50 or 100 years to come. In the late election in Kentucky, candidates were run on the question of *emancipation* in every county in the State, aided by the views of Mr.

Clay made public to advance the question, and not a man in the State was elected. This is evidence of a decided and determined opinion in Kentucky on the slavery question, where it was supposed, it had but few advocates. We may regard this action then, as a settlement of the question at present, and this South western outlet is a settlement of it for the future. That Congress will do nothing in this question of moment, I feel quite certain. No sane man in Congress claims a right to interfere with Slavery in the States, or in those to be admitted by the division of Texas—and all other rights on the subject are fustian, and designed for political effect, by all, except a few fanatics, and a fanatic is a mono-maniac. They should be regarded and treated as other patients afflicted with maladies of the brain. The question of Slavery; then is no longer open for discussion.

This field force found in the Cotton States, is the most regular, uniform, efficient body of laborers to be found in the world; because they are inured to regular labor through life, from an authority to command it, though the hirelings of Europe may be compelled to labor longer, more hours in the day, still as a body the growers of Cotton, Sugar and Rice, do more regular labor in a year. It therefore becomes more important that this labor should be properly conducted that it may be rewarded.

As above stated, the property engaged in growing Cotton is worth $700,000,000, and the value of Cotton estates is found in the negroes, and not in the land. They constitute the *real estate* of the South. They are the basis of Southern wealth, and therefore it is, that those States look to them with attention, care and jealousy.

Where the land is the *real estate*, and where homes are comfortable, and where they would still remain valuable, if slavery were not allowed to exist as one of the domestic relations of society, it is no effort to comprehend why they are less cared for, and more curtailed in plans of amusements and comfort. In the *planting States*, they are the real estate, the personal estate, the whole estate, for take them away, and you take all. You take away the foundation of the building, you take away all the elements of wealth, and leave the country a sacrifice to owls and to bats. These views are not literally true, when we go north of lat. 35° and leave the planting States. But south of lat. 35° *white men* can never cultivate the fields, and slaves are absolutely necessary.

This domestic relation of master and servant, is called Slavery, and when this word Slavery passes the confines of the slave States, it shocks the nerves of the ignorant bigot, or fanatic, for being ignorant of the true relation, he associates with the word *Slavery*, all the horrors of accumulated evils, and fortwith concludes that is his duty to apply a remedy.

I will now proceed to enumerate some of the items of "savings and profits" resulting from manufacturing at home.

Bagging and Rope for 2,300,000 bales, which is an average crop, and in weight 17 lbs. per bale, which are sold as Cotton at 6 cents, making $1 02; and the cost on average is $2 per bale, when delivered at the plantations. Showing an annual loss of $2,300,000, besides interest and exchange usually paid on these purchases.

Loss in weight, 10 lbs per bale at New Orleans and 10 lbs per bale again in Liverpool, making 20 lbs per bale on the whole crop 2,300,000 bales, making 46,000,000 lbs at 6 cents, amounting $2,760,000 per annum.

The crop is received from the States at New Orleans, Mobile, Savannah and Charleston, where it is freely sampled. I find the samples at New Orleans out of a million of bales this past year were 3000 bales, and the balance of the crop at other points would be 4000 more, 7000 bales of samples at $24 per bale, amounting to $168,000 before it is sent to Liverpool, where it again goes through the same process, with about the same result, making the sum of $336,000, omitting all the samples, saved at inland points, such as Memphis, Augusta and Nashville.

Charges and dues from the plantation to Manchester, 4000 miles off; without going into the items in detail; comprised in part of river and ocean freights; river, fire and ocean insurance, commissions, drayage &c., in New Orleans and Liverpool; not less than $8 per bale, but believed to be at least $10 in reality; but say $8 per bale on 2,300,000 bales, making $18,400,000.

These are moneyed items and are taken out of every crop on its way to the English Mills, and others costing the same, and therefore may be reckoned "*savings*," by sending the Cotton directly to the Mill from the field where it grows.

In an article published in the Republican Banner, concerning Cotton Mills, &c., I showed that, when the spindles were up among the fields, that the grower was entitled and would, in my opinion, receive as a fair compensation for the field labor, 10 cents per pound for all the Cotton he could grow, leaving to the spinning department the full value of the labor of these iron adjuncts, the Spindle, Loom and Engine, and that argument was briefly this. The owner of 15 plantations unite, and put up a Mill in a central position, and put in the operatives from the field. They now own the plantations and the Mill, and the field hands and the mill hands.

For illustration, we will say they make 100 bales of Cotton each, and they send it to their own mill, and spin and weave it into heavy Osnaburgs worth 9 cents per yard, making 18 cents per pound. Deduct 10 per cent for waste, and this gives the value of the Cotton. Now if the Iron workers, with their attendants are not entitled to more than 8 cents a pound for their portion of the labor, the field hands and mules are entitled to the balance, being 10 cents per pound. The difference therefore, between selling at 6 cents and 10 cents a pound is $16 per bale, this on the crop amounts to $36,800,000.

The profits on the mill hands, I am not prepared to make at present in dollars and cents. The field hands would get pay for cutting and hauling the wood necessary for the Engine, and cabins, kitchens, &c. The field hands would also get pay for the provisions furnished to the mill, thereby creating a home market for surplus provisions, now lost for want of a market. In three years the mill hands would be trained Engineers, Weavers, Spinners, Smiths, and Carpenters: and this is an item of value, which I can't well estimate, yet it is well understood by owners. If the Engine is out of order, and the mill must stop a

week, more or less, for repairs, the mill hands go to the field, and nothing is lost. Indeed it might be found economy to turn out the mill hands iuto the crop in May or June, the busy month in cultivation, and also in October, the fine month for picking. This would enable the field hands to manage and save a very full crop, nearly as large as they would all make together. The force necessary to go into the mills is 1-5 in number, but about 1-6 in strength. The plantations relieved from this force, would by rest, improve in the certainty and quantity of crops, and thus avoid a total exhaustion of the lands, if the present system be pursued, this is an item of profit, but not fixed in amount.

RECAPITULATION.

Loss on Bagging and Rope - - - -	$2,300,000
" in Weight - - - - - - -	2,760,000
" Samples - - - - - - - - -	336,000
" in charges paid in going to mill, - - -	18,400,000
Profit by getting 10 cts instead of 6, - - -	36,800,000
Profit on the mill hands, - - - - -	15,000,000
Increase in value of slaves, - - - -	5,000,000
Profits from home market, - - - - -	2,000,000
	$81,596,000

This is an annual loss, except two small items, and therefore would be an annual saving to the Cotton States. The unenumerated items, I believe if brought to dollars and cents, would reach $20,000,000 more. According to the old adage, a penny saved is a penny made. If therefore the Cotton States should by manufacturing at home, save $100,000,000 per annum, they have made that sum.

Being fully satisfied of the practicability of the plan; of the ability of the Cotton growers to put up the log cabin Cotton Mills, and to pay for the machinery as mentioned in my first article, I am bound to conclude that the brightest day for the South, is in the future. By insuring 10 cents per pound for Cotton, the real estate, negroes, &c., would advance in price $300,000,000, perhaps double that amount, as soon as the machinery is up, the most judicious, economical, self-preserving act, that can now be done by the Cotton growing States, is to order the Spindles and Looms, which will cost $50,000,000, and by making this debt, if they wished to change pursuits and sell, it would be worth as a speculation $250,000,000.

My own view of the increasing ratio of value of Cotton property is this. If the present value be $700,000,000 estimating Cotton at six cents per pound, it would be worth at least double that amount if it were 10 cents, making the increased value $700,000,000 by the plan of manufacturing at home.

S. R. COCKRILL.

ART. V.—ENGLISH PROGRESS, AND ENGLISH MANNERS.

The following communication, from a distinguished citizen of Kentucky, now travelling in Europe, is calculated to give a clearer view of the nature and spirit of reform now going on in England, than anything we have met with in the public prints. The writer is a close observer of men and things; and his remarks on the manners of the people, are made with so much fairness, that we are persuaded that the English themselves must admit their truth.

EDITORS.

MANCHESTER, 19*th Aug.*, 1849.

GENTLEMEN: It has been my purpose to have written you long ago, but it requires a man to be on this side of the Atlantic, with limited time, to realize the difficulty of finding any to devote to other than indispensable purposes. If I had a little to spare after the busy scenes of the day, I considered it best to register occurrences for future use, in a journal, from which I might draw at leisure—but even this, I have but little time to do, although I have now been here upwards of four months. When I say here, I mean on this side of the water, for I have made the tour of the continent, spending but little of my time in England.

I have travelled with an eye to the useful, and as far as possible, to draw lessons from what I saw, to benefit our country; and no American can travel on this side without doing this. In England, he is struck with the isolation of man among men; and when he goes to Paris, and sees over the doors of all the public buildings, and almost everywhere that he turns his eyes, "Liberty, Equality, Fraternity," he is almost induced to exclaim—Why, these people surely must have lived in England, where those qualities are so much wanting, that now, when they have here the power to do as they will, they are determined to escape from a selfish coldness to the opposite extreme. There is an embarrassing feeling to a traveller, who is disposed to picture things as they are, and who sees so much to admire, and so much to condemn, that he can hardly give the lights and shades, without making an unnatural picture; and where he has enjoyed the warm hospitality of the better specimens of man, he feels it almost an act of ingratitude to picture the opposite class—for say what we will of John Bull in the general, some of his family are the best specimens of human nature; but

on the other hand, there are certainly some of the worst, and it has fallen to my lot to see some of both, and to hear of more. While my warm friendship for those who have won my esteem, inclines me to look to the bright side, and to say nothing which could wound their feelings —in fact, to see England reflected in *their* characters—yet, unless the mirror be held up to nature, and the defects be shown, how are they to be remedied. I ask myself—were I an Englishman, would I wish the faults of my countrymen perpetuated, sooner than endure the mortification of having them exposed. My answer is, no. Show them to us—not in a spirit of vindictiveness, for then we would place it all to the account of ill nature and spleen, and the lecture would lose its effect—but show them in a spirit of kindness, and we will profit by the lesson.

I will premise, before I proceed, that the region around Manchester, is the cradle of Liberty for England—the school of investigation—where all reforms begin. There the light first dawns in favor of human rights; and such is the effect of a consciousness of success, that it begets a zeal and an energy, which ensures that success. At this time there is a movement going on in England, which has taken root in the manufacturing districts—perhaps Manchester deserves no more credit for it than Birmingham—which is to revolutionize the government—not by the force of arms, but of reason. Indeed, it solves a difficulty, in some degree, which, but a very short time since, I considered insuperable, without a moral revolution; that I looked upon as very doubtful, or at least very distant. But since my visit to this place, I begin to change my opinion. In all the manufacturing districts, clubs are being got up to purchase freeholds to extend the right of suffrage. You are aware that a man must have forty shillings income here, from landed property, or a town freehold, to entitle him to a vote, and yet, the number of votes is exceedingly small indeed—not one in thirty of the population. To accomplish the object they have in view, all the working classes are encouraged to deposit one shilling per week, with the treasurer of the club, to buy a tract of land, so soon as he (the treasurer) has enough to make a first payment. He buys as large a tract as his means will allow, getting a credit on a large portion. This is divided into forty shilling freeholds. If there be five thousand subscribers, and the amount purchased will give but one thousand freeholds, lots are drawn to determine who shall be the proprietors of those. Then, when enough more is subscribed, a similar process takes place, and so on; and the club is daily increasing in numbers. Like the temperance movement, the infection is taking every where; the zeal of the societies increases with their success, and prosolytes are being made in proportion to their zeal. The result will inevitably be, that in less than three years, these small forty shilling feeholders will send a majority, or by moral force, control a majority of the members of the House of Commons. They go for a reform in the expenses of government—cutting down the army, navy, all high salaried officers, &c. At present they fix the reduction at ten million sterling per annum, $50,000,000. But when they get this, they will go still further. This movement is by no means licentious in any of its traits. It is a cool, philosophical, well digested plan; practicable,

sensible, and conservative in its object, arising from a conviction that the country was approaching the vortex of ruin, and that without this reform it could not much longer stand. The consciousness that there is, within their reach, how tardy soever it may be, a remedy for misgovernment, keeps down all inclination, in England, for a resort to physical force to right their wrongs. They have liberty in their frame of government; but it is so far removed from the masses, that they have to be very patient and persevering in the construction of scaffolding, and ladders to get at it; but they are learning how to do it, and are so delighted that they have found out the way, that the fever here, to have a hand in the work, is as much of an epidemic as the cholera, and in ten years from now, England will be almost as much of a republic as the United States. I do not think they will relinquish their monarchy; they are especially attached to that form; but it will be merely nominal. The Parliaments will be triennial, and the nobility will stand, because, through the House of Commons they cannot reach the Constitution—the concurrence of the House of Lords would be necessary, and I do not think the people of England wish their form of government in any way changed. They wish a reform in its expenses—a greater responsibility by the House of Commons to the people by more frequent elections, and an extension of the right of suffrage. These accomplished, I think they will be content.

To return, however, to the part of John Bull's character which needs amendment, and which, in a gentle way, I think he ought to be informed of—I will say, that, with many distinguished exceptions, he is lamentably deficient in good breeding, when you descend below the nobility. It is a singular anomaly for a people of strong sense, and chivalrous feelings—for generally speaking, chivalry implies politeness and courteousness of manners—indeed, bravery, without these attributes is not chivalry, it is mere brute courage. But John Bull's good feeling, if he have any, is covered by an alligator's skin. He is as rugged as a bear, and as cold as an icicle. I mean only the majority, for as before said, I have met with mostdistinguished exceptions—as courteous, well-bred and elevated gentlemen, as I have ever met with any where—but as a sample of the lower orders, I will mention an occurrence, as related to me by Mr. Coleman, the Massachusetts agricultural commissioner, who makes a periodical tour to England and Europe, for the purpose of improving Massachusetts agriculture. He was at an agricultural meeting in London, and, as an American, proposed an exchange with the society there, of annual agricultural reports. A member of the English society rose, and answered, that he was very willing to let the Massachusetts society have a copy of their reports; but they cared nothing about getting the Massachusetts report in return. Now had such a piece of rudeness occurred in America, towards an English commissioner of equal standing with Mr. Coleman, or, indeed, towards any man of respectability, it would have rung through England as an evidence of our barbarism. Indeed, such an occurrence could not have happened in America. I venture to say, there is not a society in the Union which would have admitted so rude a man as a member; and had any member so far forgotten himself as to have acted thus brutally, the cry would have been

immediately, from every quarter of the house, "put him out! put him out!" I witnessed the following occurrence myself, at Liverpool. Mr. Coleman came over in the same ship with me, and by his invitation, I accompanied him to Brown's hotel—Clayton square—a very genteel house, Mr. Brown himself very much of a gentleman, and his boarders generally, noted more than common, for their gentlemanly deportment; but among them was one of a very different stamp, as the result will show. He was, too, a quaker, about, I suppose, twenty-five or thirty years of age—well dressed, genteel in appearance, and being in a genteel house, of course, we had a right to suppose he passed for a gentleman. Mr. Coleman, it must be understood, is a man of over seventy years of age, venerable and respectable in appearance, and calculated to command—indeed, his manners invite civility, from everybody. Finding he was from America, this quaker got into conversation with him, and presently remarked—"Why, I always understood the Americans were the greatest rascals in the world!" Mr. Coleman had before remarked to me, that I had no conception of the rudeness I would meet with in this country. I confess, however, this rather exceeded what he ever had led me to anticipate. Turning to me, Mr. Coleman remarked—"Did I not tell you so?—they are the rudest, and most ill-bred people you ever saw"—or words to that amount. Deeming this a full retort, and considering them what Mr. C. had described them, I did not think it necessary to make any remark. A sense of my own self-respect would not admit of it; but this very man sat at the table with gentlemen. I saw him on a second visit to the house, only a few days ago, sitting at the head of the table. I admit that it would be very unjust to take such as samples of English character—indeed I was pleased to find it much better than such specimens had induced me to anticipate—but there is a trait prevalent very generally, and which cannot be denied—an inclination to make others feel their importance, (the English,) and the want of it in the stranger. Exactly the reverse is the character of the American. His effort is to make the stranger feel his own importance, and make him pleased with himself. If you take the polished Englishman, he is a thorough gentleman—and very many such you will find—indeed, so many, that it is with regret that I name those who are not—but it is due to the people themselves to point out those faults, that they may be corrected. I do not speak of them in the spirit in which English travellers generally speak of us. It is not to depreciate them, and make my letter popular. I have no such unworthy feeling;—nor do I do it to aggravate that unfriendliness which already exists to too great an extent. I do it to correct an existing fault; for it is a lamentable fault for any people to have such manners as to make strangers feel uncomfortable and unpleasant while in English society;—to see that there is a constant effort to make you feel your own insignificance. No where else on earth does the same unkind feeling prevail. I am persuaded that Englishmen cannot be sensible themselves of this defect in their character. It is a crying one, and ought to be corrected; and it is to be hoped that when they effect the great reforms they are now after, they will turn that zeal which is so effectual, in whatsoever direction it is carried, to mending the manners of the commonalty. Let it be

understood that uncourteousness, unkindness, rudeness—are characteristics of low breeding, as in fact they are, and encourage more respect for strangers. Strangers will then esteem them more, and have kinder feelings for them. The class I speak of, are of course the middle class. Well bred men only fall from their good breeding by association. But the class in America corresponding to the class I speak of here, are fifty years ahead of them in polish of manners. It is very common in English travellers to single out some rude American, and hold him up as a sample of his countrymen. But you will seldom find an American, however rude he may be, who would not yield his seat in a stage coach to a lady, or any genteel female. An Englishman will not generally do it. If an American takes a friend into a newsroom, or coffee-house, and makes him acquainted with the inmates, they take pleasure in making him feel at home; and while that is the case with many here, with a majority it is not so. They leave him to get along as he can. At first he is mortified at what he views as want of respect. Soon, however, he learns it is not; but that it is the nature of the people.

Going from England upon the continent, the contrast is truly great. Everything is reversed. A kind, courteous politeness prevails almost everywhere; and an American finds friends in every quarter. I had letters from the highest sources; but hardly ever had occasion to present one. In almost every instance, in travelling from one city to another, I would make some acquaintance of the first standing, from the mere fact of my being an American, which gave me all the facilities I wanted, without the aid of letters. I went all through Germany, in all its disturbed condition—was in Carlsruhe the night prior to the battle there, and met with no rudeness;—some little difficulties, and some trouble, to be sure—some danger, and considerable effort to escape; but still, when it was known I was an American, I got on with respect and politeness from all.

The feeling I speak of is more mischievous in its tendency than the English are aware of; and time may give them proofs thereof, not of the most agreeable kind, as may be judged by the following dialogue between myself and another American. I remarked to him, "The people of England are a singular race. They seem to have the most isolated feelings of any men I ever knew. If there are a dozen coaches in a railroad train, and a dozen Englishmen, each will take a separate coach. If, at a hotel, there are a dozen Englishmen in a dining-room, and a dozen tables, no two will dine at the same table. They seem to have an aversion to their species." "Yes, d—n them!" said he—"they hate one another, but they have an especial hatred for us. They will tell you—'Oh, the English and Americans should never have another war! They are the same people; their interests are the same,' &c.; but sir, their every movement, their every act, shows their mortal hatred for us. I have no fancy for them. I detest them from the bottom of my heart; and I would not care how soon we had a war with them. The fact is, we will have to thrash them into respect; and I would not care how soon it was done—the sooner the better." "Sir," said he, "I was in a reading room last evening, and I heard a boy ask his father where the transported criminals were sent. He an-

swered, 'Now, to Australia. They used to be sent to the United States when they were our colonies.'" "I remarked to him," said he, "'With due deference, sir, to your opinion, I beg leave to inform you that you are mistaken. You sent very few but state criminals to the United States while they were your provinces.' The man answered, 'He did not know—he had been so informed.'" "Now, sir," replied my friend, "they are the most ignorant men living, for their assumed intelligence. An American boy of fifteen, in the general, is better informed than an Englishman of twenty-five." "These fellows," said he, "are taught by their fathers, who hate us, that America was settled by criminals, as New Holland has been. They never read, and therefore they never find out any better. It suits their humor to believe what their ignorant fathers tell them; and so they go on in their error. They do not know that New England was settled by men whose independence of spirit drove them from among their tame fathers; and that Virginia was settled by cavaliers, the flower of their chivalry. Some were transported for noble traits of character; but in both cases, men whose independence of feeling would not allow them to remain among tyrants—the New Englanders to escape religious persecution—the Virginians because of a republican spirit which rebelled against tyrants, and caused their transportation; but, as evidenced by history, they were men of the first standing. In time, a few other criminals were transported; but not enough to alloy the choice population, which left them from principle; and as one hundred criminals remained where one went, the emigrants were in proportion greater than those left behind. It was the very cream of their population which settled our country, and the transplanted population altogether, is as superior to what was left behind, as it is natural it should be, from the superiority of our institutions, and the facility with which man can get a living with us." "Very good," said I, "you are perfectly right in what you say; but do not damn a whole people for the rudeness or ignorance of a few. I admit there is a vast amount of rudeness among them; but all are not so." "Oh! there may be exceptions enough to prove the truth of the general rule. I do not believe in their civility, nor their justice, nor their wisdom; and I do know that they hate us most cordially. I do not care to keep any terms with them. I would not avoid a war with them. I care not how soon it comes. It is certain to come; for a people who are so successful in making themselves hated by us, will find as steamships increase our intercourse, that this hatred will reach a point which will make a war with them the most popular measure which could be proposed in America; and the fact is, sir, it would be the best thing which could happen. It would increase our navy until we would drive them from the ocean, and then, perhaps, they will learn to respect us." I would not name those remarks, if they were alone to reach our population; for I differ with my friend. I deprecate all bad feeling between the two countries. We have every reason for the maintenance of friendly relations, as necessary to our mutual prosperity; nor do I think it a matter to fight about, if they are ill mannered. It is, to be sure, to be regretted, as it is that individuals are so with whom we are compelled to come in contact; but we should have our hands full, if we were to under-

take to quarrel with every man on account of his ill manners, or want of feeling, two characteristics of John Bull which stand prominently out from the canvass, in a true portrait of him; and they are so much accustomed, in England, to catering for the appetite for slander against us, that journals which have no especial hatred of us, do it without being conscious of it. You will constantly read such language as this: "You might look for such notions from Honolulu, the Sandwich Islands, or the interior of America." Or, speaking of the French National Assembly, and its violence—"they equal the riotous proceedings in some of the American assemblies!" These are two quotations which just now strike my mind. You can hardly take up an English paper without noting something of the kind. And yet, the last London *Times* relates with astonishment, the prevalence of the most perfect order and safety in California—a strict regard to individual rights—to such an extent that a man may leave his goods and his gold in his tent, and no one thinks of disturbing it. In commenting on this state of things, the *Times* says, "it is attributable to that habit of self-government, which is constitutional with Americans;"—or language to that affect. What higher compliment could be paid to our countrymen?—and, indeed, when we look at the kind of population which has gone to California from the United States—far below the average, and that a minority of the whole—the balance, a majority being from every nation, and without any notion of self-government, and, of course, kept in order by the American portion of the population—it is a wonderful evidence of an ingrained sense of the power of self-government, which prevails with our people. Among any other population, there would prevail robbery, rapine, outlawry, anarchy. There, an infusion of less than half of American character, suffices to impregnate the whole mass with enough of equity to enable a whole community to govern itself, without statute laws, from pure principles of honor.

Contemplate this picture, Messrs. Editors—scrutinize it closely, first—examine it in all its minutia—then hold it off, and contemplate it in the "*tout ensemble*," and say, have you ever looked upon its like before? This is a small off-shoot of that magnificent tree, which English travellers, and their home writers, are daily endeavoring to bring into disrepute. Even Englishmen who are admirers of our country, who are themselves high minded men, are so sensible that some slurs on us are necessary to season a dish for the English palate, that they are prone to make prominent whatever they find in their travels most derogatory to us. I will instance a case:

In Manchester, there is a gentleman of high order of intellect, among the leaders of the reform movement—a man of enlarged, and generally philanthropic views—magnanimous in his feelings, and with notions in the general, which stamp him as one of nature's noblemen—his kindness and hospitality I had the pleasure to enjoy, and saw enough of him to justify me in saying what I have. He is, moreover, an admirer of the Americans, their country, and institutions—has made two trips there, and published a journal of the last, a copy of which he gave me, and which I read with a great deal of pleasure, as doing justice to our country, and exhibiting the proneness of other travellers to do us injustice. But this traveller sees at Cincinnati, pistols and bowie

knives exposed in the streets for sale; and on his arrival in Louisville, shakes the hand of a brother, who had the day before had a son assassinated in the streets.

I do not complain of his mentioning the incident, it is very natural he should. But I do complain that the manner of naming it, and the previous circumstances, are calculated to leave an impression that assassination and murder are more common in the United States than in England, whereas, I would venture a wager, that there are four crimes of that kind, as well as of all others, committed in England, for one in the United States. I have hardly taken up a paper since I have been in England, which has not had some account of a murder in it. And as to lesser crimes, they fill, always, a large space. The *gentlemanly rascalities*, such as railroad frauds, &c., fill one fourth, nearly, of every paper. If English papers had American titles, and Enlish names and localities were exchanged for American, so that John Bull could believe in reading them he saw a picture of America, he doubtless would then pronounce them rascals indeed.

From the nature of the dealings between America and England, England has necessarily been the creditor, and when periods of distress have occurred, failures and losses to English merchants have been the necesasry consequence, and of course, contumely and abuse from the losers is natural when the loss occurs; but no reparation is made when those losses are paid up. About 1839, a period of distress occurred when English losses, by American houses, amounted to many millions of dollars, temporarily. In less than five years after, however, as I am credibly informed, a very small per centage of this debt remained unpaid. There was a great outburst of indignation, at first, about the loss. The impression was made on the English mind, that England had lost greatly by America. When this debt was paid, however, nothing was said about it, and so the young Englishman is allowed to grow up in the belief that Americans are great rascals, whereas, American losses by English houses I really believe, from what I can learn, are infinitely greater than English by American—not that the apparent loss is so great—that is three or four to one against America—but America is so recuperative in her character, that she is almost sure to repair her losses. Not so in England. When a house falls there it seldom rises again. The apparent is the real loss.

In a company of Englishmen, the subject of slavery in America was broached, they said it was a blot upon us. "Admit it, gentlemen," said I, "are you the parties to throw it up to us? Without going into an argument about the right and wrong of the matter, are you who put this stain, if it be one, on us, the men to charge us with it? Was it not your policy, your laws, your wrongs, to which we are indebted for it? That you forced the slave trade on us, against our wills, was one of the causes assigned in our Declaration of Independence, according to the first draught, though it was finally left out, and now that we do not do what we cannot well do without incurring a greater evil, you abuse us." "But," said they, "we acknowledge we did wrong then, that is no reason why you should do wrong now." "It is a reason, however, why you should be very modest in charging us with that as a sin, which you originated. If you will look to India an

Ireland, you will see enough of sin at home, to correct, without meddling with the concerns of your neighbors."

An Englishman once remarked to me, "Anything is right with John Bull as long as he does it, but when he ceases to do it, then it is all wrong." I have often thought, when I have heard Englishmen talking as they do of others, how applicable to them were Burns' lines—

> "O wad some pow'r the giftie gie us,
> To see oursel' as others see us!
> It wad frae monie a blunder free us,
> And foolish notion."

It is a singular fact, that we owe the existence of slavery among us, to England,—that the slave States, viewing it as an evil, were themselves the first movers of measures to put an end to the trade, and it was the northern members of Congress who caused its extension until 1808. Virginia, in ceding the North Western Territory to the United States, comprising all the States north west of the Ohio, made a condition to the cession, that slavery should not be introduced there, and the history of her legislation will show a gradual approach towards an ultimate abolition, until, however, the foreign traffic was prohibited, then, when the northern States could no longer make a penny out of it, a slight spark began to appear, of discontent at its existence at all, and gradually they began to meddle with the subject, and to irritate the slave States, by which means they caused a reactionary movement on the subject by the slave States, which has increased, just in proportion as northern meddling has advanced, until now, to use a military expression, parties are changed, "front to rear"—the southern and northern States having exactly reversed their positions.

This is a feeling of human nature—no people are willing to allow others to meddle with their family concerns, and no provocation is greater, to an outburst of indignation, than any attempt to do it. I have however, occupied more space on this subject than I intended. I will close with summing up a few more remarks in regard to English notions of us.

With the exceptions named, of an ingrained habitual inclination to cater for an appetite which craves slander of us, and which is therefore unconsciously administered to even by some just and high minded men, there are many in England, who do us ample justice. They admit that we have exhibited to the world, a sublime moral spectacle, in our mode of self government; that the unprecedented advance of our country in the arts, sciences, and general prosperity, is the result of a wisdom in our legislation, and policy, (together with the possession of unbounded territory) which mark us as a race, distinct almost from the balance of the world—except themselves—they claiming the same characteristics, but not operated on in the same way from difference of circumstances. Originally we were the same, but now entirely different—as different almost as any other two nations you can find.

An Englishman seems to consider it a duty he owes to himself, never to sacrifice his own comfort for the benefit of others, and he considers the man a fool who does it.

An American is exactly the opposite character. He can enjoy nothing alone, he neither eats, nor drinks anything with a relish, un-

less there is some one to partake of it with him, and if he has a bottle of wine, and no acquaintance at table, if he has any reasonable plea for it, even an accidental passing of a word or two with a stranger, he will send his bottle and ask the pleasure of a glass with him.

Two Englishman will travel all day together in a rail road train, and probably never speak to each other. Two Americans could not do so. The one is an anti-social, the other a social people. The English, fond of the glitter, pomp, and display of royalty and nobility, take pride in the immeasurable distance that those are elevated above them. Americans are willing to acknowledge no superiority, but that of intellect.

In England the people are accustomed to view themselves as the subjects of a sovereign. In America the people view their rulers as subject to them. There is a feeling in every American, that he is part of his government, that he is one of the members of a great co-partnership, and there is an inward, manly, self consequence resulting from it, which is visible, in his very movement—not a vulgar swagger like a court house bully—but an elevated, dignified self-respect, and courteous demeanor towards every one, evidencing that he expects a similar deportment in return towards himself, and he will admit association on no other terms. Hence, there is most generally a non-conducting atmosphere speedily created between himself and most Englishmen of the middle order, that he comes in contact with; because the deference which an American accords to others, and expects in return, is such as is only accorded to noblemen here, by the middle classes, including merchants, manufacturers, &c. Among the more elevated classes, the manners strikingly resemble the refined Americans. They are kind, courteous, and pleasant to strangers. I have travelled with some of them, who have exchanged cards with me in the cars, and invited me to call upon them. Many of the merchants and manufacturers, too, are the most polished gentlemen of the land in their manners. My general remarks apply only to the bulk.

If I had any expectation that this letter would ever see the light on this side of the water, I would say to those friends whose hospitalities I have enjoyed here—My object is not an ill natured one, but is due in part, to vindicate my own country from the injustice done it by most English travellers. In part, it is designed "to hold the mirror up to nature;" that Englishmen may see themselves as others see them; with a hope that it may learn them more charity, and improve their manners towards strangers, in which they are generally candid enough themselves, to acknowledge they are lamentably deficient. The time is coming, when they will gain more than they will lose by being civil. It is evident to them, and their enlightened men all acknowledge it, that America is destined, at no distant day, to become the first nation of the world. As yet, they think she is not; that she is behind them. But they are mistaken. I have been among them, and on the continent, long enough to be able, as far as my feeble powers go, to measure my own country by those on this side of the water, and it requires only feeble powers to see that we are now a giant in his teens, whose strength in the gristle is greater than the hardened maturity of any other nation; and if, unfortunately, events should occur to make a test, it will be soon seen that I am right.

If I had more time I would like to give a picture of the improvements in England, which, whatever may be thought of the manners of the people, evidence them to be a magnificent nation. Indeed, this idea suggests itself to the traveller, wherever he goes. If a plan be feasible in England, the cost is no bar to its execution — straightway it is done, and when done, it is done as it should be. No better conception can be had of the immense wealth of England, than to see her railways, bridges, canals, and other public improvements. I have passed on a canal boat, under a canal above, which still passed under a railway above — the whole being three deep — and where I now write, (New Castle), there is a railroad passing over a part of the town; houses five stories high along-side of it, not coming up to the arches which support it; and a bridge, called the high-level bridge, over the Tyne, the most magnificent one I ever saw. Its cost, with the cost of the depots, is estimated at $5,000,000 (one million of pounds). John Bull, indeed, in all he does, except in his deportment towards his fellow man, is a magnificent fellow, and as it fits so aptly, I cannot withstand the temptation, though it is retorting their own want of charity, to hold up an isolated case as a characteristic — to close by saying, in the language of one of their clergymen, who lately took the hand of a woman condemned to die, and held it fast in his over a candle, until her convulsive struggles liberated it:—"I hope you will not think I desire to give you pain; it is only to give you a foretaste of what you may expect after death, unless you repent," &c.

To the honor of the English press, however, I will say, the act has caused universal reprobation. Where can you find a parallel to this in America?

But the time is come when the fruits of our institutions; the prosperity of our country; the happiness of our people; our rapid increase in population, and the evident wisdom of our laws and policy, are making it now, a poor harvest for slanderous journalists. It is now in decided bad taste to slander us. The thing will no longer bear telling.

I began this, having a day in Manchester, with some leisure; but could not finish it there. Being detained here, I have devoted to you part of another day, and now end more than half asleep.

T.

New Castle, *9th September*, 1849.

ART. VI.—EDUCATION.—NO. VI. (*Continued from page* 333 *Vol.* 2.)

THE INTELLECTUAL DISCIPLINE OF SCHOOLS—(*Concluded.*)

In previous numbers of the 'Western Journal,' I pointed out the advantages to be derived from a knowledge of language and the study of words; and showed in what way the minds of children could be exercised upon their reading lessons. I regarded a proper attention to the *intellectual* department of reading as one efficient means to be em-

ployed by the teacher in training the minds of his pupils to think and reason. But if the teacher has enlarged views of his duties, and rightly comprehends the true objects of education, he will not confine himself to this single means but exercise their understandings in various other ways equally available, for that purpose: he will direct their attention to things as well as to words. Putting aside books, he will occasionally by oral lecturing, and by interrogatories, make them familiar with the nature and properties of the objects which surround them; thus teaching them the art of distinguishing, and discriminating intelligibly between one thing and another.

This is an important and very efficient means of bringing the faculties into play.

The organs of sense strongly impress the mind with images, but the notions formed, and the ideas thus conveyed to the unassisted minds of children, are formed and conceived in a very imperfect manner. It is far easier, however, to attract and fix their wavering attention by directing it to objects of sense than by any other means. Having therefore, as stated above, sufficiently dwelt upon the importance and advantages of an attention to *words*, it is my intention on the present occasion, to consider in what way and manner we can use *things*, in order to promote the same object — the development of the powers of the mind.

Dr. Aikin has remarked that, "we daily call a great many things by their names, without ever inquiring into their nature and properties, so that, in reality, it is only their names, and not the things themselves, with which we are acquainted."

Some thirty years ago, an ingenious German, named Pestalozzi, being strongly impressed with the little efficiency of the common modes of instruction, by means of the book, only, devised a system, which he carried into effect under the name of "*Lessons on objects.*" The system has been introduced, and successfully carried into practice, in some other countries, also. It has been occasionally adopted, I believe, in parts of our own country; and if it has ever failed of accomplishing the purposes, and fulfilling the expectations of its advocates, the failure may be attributed more to the defects of the instructors employed, than to any inherent defects in the system itself. I find in the "*Quarterly Journal of Education*," an exposition of this mode of instruction, given in a review of a publication entitled "*Lessons on Objects*, as given in a Pestalozzian school at Cheam, Surry." This review explains and elucidates the system in a better and clearer manner than I can pretend to do, without its aid. I prefer, therefore, making use of what it contains, that is most material to my purpose, and limiting myself to such observations as will be found in the following extracts. They are of considerable length, but will scarcely admit of curtailment, consistently with my object of gving a full and perfect explanation of the methods resorted to, and the intentions they are meant to fulfil: —

"The mind of a child,' observes the writer, 'is very much under the influence of the organs of sense, and is continually drawn away from one object to another, as each successively presents itself. To fix the attention in any way at this age, for the attainment of knowledge of any kind, is a difficult task: but to tie it down to books which are uninteresting and often unmeaning, is as impossible as it is absurd.

"Time is lost by the teacher in his fruitless endeavors; the mind of the learner is soured; and too frequently considerable obstacles are thereby raised to the future acquisition of knowledge.

"The extreme activity of the perceptive faculty suggests some visible material as the stock on which we may engraft lessons in useful knowledge. The toy with which the child plays, the table at which he sits, the room in which he lives, the objects which are most about him, and which most interest him, are the most appropriate subjects of enquiry, because he is familiar with them. He already knows their qualities, some at least, and has discovered many of their uses.

"Any new facts connected with such objects he learns with ease and pleasure; and what he thus learns is readily remembered, and, being often found immediately useful, furnishes a motive for fresh exertion." * * * * * * * * "The mind of a child, however, disadvantageously circumstanced, *does* from the ceaseless activity of the perceptive faculties, and by its own inquisitive disposition, obtain for itself a certain store of practical knowledge. The unassisted powers of his mind are sufficient to discover the *more obvious* relations of things; but of those qualities which lie hidden beneath the surface, and are not immediately observable, he remains either entirely ignorant, or forms misconceived notions of their nature, because he has no directing hand to lead him to the discovery of their truth. In the course of his merely voluntary and self conducted instruction, error mixes itself up with truth; a confined or misdirected observation forms incorrect or ill-defined ideas, or draws wrong conclusions; the memory fails, and imagination supplies false images, and in this manner error and prejudice fill the place of real knowledge. It is the duty of the teacher to obviate so serious an evil. The pupil must be continually admonished to look at and to examine things, and to compare them.

"As the judicious architect carefully provides for the firmness of his foundation, knowing well that the safety of the whole fabric depends upon the basis whereon it rests; so the reflecting teacher will be careful to lead his pupil first to nature, and so form his mind to habits of correctness, by placing the *very objects* with which he is to be conversant all his life, under his direct observation. He thus makes *things*, and not *words*, which are the mere signs of things, the objects of the childs attention. Nature becomes his first book; and it is a book of most interesting contents,

"His walks abroad, every movement around him, every thing in short which presents itself, to his lively mind, furnishes a useful, and what is more, a most interesting topic of conversation.

"The child himself assists in the work of instruction, because he loves it; 'tis no longer a drudgery, but delight; it is no longer a lifeless work, lagging on through a weary and uninteresting process, but it is a living spirit which animates the child's mind, and leads him on to the acquisition of solid and real attainments.

"In order,' says the same writer, 'to explain the meaning of these remarks more fully, and also to give some notion of the plan on which it is proposed that the lessons should be conducted, we select at full length the first in the series.

LESSON I.

GLASS.

Glass has been selected as the first substance to be presented to the children, because the qualities which characterize it are quite obvious to the senses. The pupils should be arranged before a black board or slate, upon which the result of their observation should be written. The utility of having the lesson presented to the eyes of each child, with the power of thus recalling attention to what has occurred, will very soon be appreciated by the instructor.

The glass should be passed round the party to be examined by each individual.*

Teacher. What is that which I hold in my hand?

Children. A piece of glass.

Teacher. Can you spell the word "glass?" (The teacher then writes the word "glass" upon the slate, which is thus presented to the whole class as the subject of the lesson.) You have all examined this glass, what do you observe? What can you say that it is?†

Children. It is bright.

Teacher. (Teacher having written the word "qualities," writes under it—it is bright.) Take it in your hand and *feel*‡ it.

Children. It is cold. (Written on the board under the former quality.)

Teacher. Feel it again, and compare it with the piece of sponge that is tied to your slate, and then tell me what you perceive in the glass.§

Children. It is smooth—it is hard.

Teacher. Is there any other glass in the room?

Children. Yes; the windows.

Teacher. (Close the shutters.) Can you see the garden, now?

Children. No.

Teacher. I will tell you, then; pay attention that you may recollect it. It is transparent. What shall you now understand when I tell you that a substance is transparent?

Children. That you can see through it.

Teacher. You are right. Try and recollect something that is transparent.

Children. Water.

Teacher. If I were to let this glass fall, or you were to throw a ball at the window, what would be the consequence?

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* 'By this means each individual in the class is called upon to exercise his own powers on the object presented, the subsequent questions of the teacher tend only to draw out the ideas of the children, and to correct them if wrong.'

† 'This question is put instead of asking, "What are its qualities?" because the children would not yet in all probability, understand the meaning of the term, but by its frequent application to the answers to this question, they will shortly become familiarized with it.'

‡ 'The art of the teacher is to put such questions as may lead successively to the exercises of the different senses.'

§ 'The object of the teacher here is to lead the pupil to the observation of the quality *smooth*, and he does so by making him contrast it with the *opposite* quality in another substance; a mode of suggestion, of which frequent use may be made.'

Children. The glass would be broken—it is brittle.
Teacher. Could I in the same manner break the shutter?
Children. No.
Teacher. Could I break it if I used great force?
Children. Yes.
Teacher. Would you, therefore, call the wood brittle?
Children. No.
Teacher. What substances, then, do you call brittle?
Children. Those which are *easily* broken.

'These are probably as many qualities as would occur to children at their first attempt; which being arranged on the slate, form an exercise in spelling. They should then be effaced, and if the pupils are able to write, they may endeavor to remember the lesson, and put it down on their slates.'

"It will be observed from this lesson," observes the reviewer, "that the chief business of the teacher is to draw out the ideas of the children, and to direct them in a right channel. He must likewise continually bear in mind, that the knowledge of a *term* should follow the conception of the *idea* which it expresses; and he should never give a word or expression to a child, till the young learner feels the want of a term to express some quality or thing which has been fully comprehended.

"The second series consists of a number of lessons, calculated to fix in the mind the knowledge already gained by the previous series, and to bring the powers of judgment and comparison into more active operation. It is here very properly recommended, that the child should be led to classify the various qualities of objects, according to the organs by aid of which they are conceived. A list of the lessons of this series is here given, and one is transcribed in full:

Lesson 1. A Pin.	Lesson 8. An Egg.
2. A Cube of Wood.	9. A Thimble.
3. An uncut Lead Pencil.	10. A Penknife.
4. A Pen.	11. A Key.
5. A Wax Candle.	12. A Cup.
6. A Chair.	13. A Grain of Coffee.
7. A Book.	14. A Pair of Scissors.

LESSON 8.

AN EGG.

Parts.	*Qualities.*
The Shell.	It is Oval.
Skin.	White.
The White.	It is Hard.
Yolk.	Edible.
Interior.	Nutritious.
Exterior.	Opaque.
Surface.	Dull.
Embryo, or Future Chicken.	Shell is Brittle.

Thin.
Smooth.
The White is Liquid when raw.
Solid when boiled.
Semi-transparent.
Adhesive.
Sticky.
Insipid.
Yolk is Yellow.
Liquid.
Soft.
Opaque.
Odorous.
Sapid.

"In the third series, the teacher, who has now firmly grounded his pupils in the elements of sensible knowledge, and has in some degree habituated them to careful and constant observation, leads them to exercise their judgment in its more complex operations. He no longer confines their attention merely to the external and most obvious qualities of things, but he teaches them to penetrate deeper into them, and to consider their structure, varieties, and combinations.

"The objects here presented before the children are such as consist of many parts, each possessing many qualities, nicely distinguished from one another; or else they are things that exist in different states, and fulfil, accordingly, different offices. The differences between such things as wool and woolen cloth; between cotton, cotton thread, and cotton cloth, white or colored; and between a pen and a quill, may be presented to the pupil, at this stage of his progress.

"After having gone through a regular course of instruction, such as the above, children generally possess a power of observation and discrimination, which may easily be applied to any object which presents itself. They view things with a different eye from what they did before. They are always actively looking about them; and they detect qualities and relations before unobserved. The children must now be exercised in arranging and classifying objects, connecting things by their points of resemblance, and at the same time individually distinguishing them by their points of dissimilarity.

"This work of classification becomes actually necessary, to the retaining of ideas after a certain degree of knowledge has been acquired.

"A large number of individual, unconnected ideas, cannot be remembered; but, when linked together by some true principle of association, they are easily and pleasingly recalled at will.

"With this view, in the fourth series, the spices, among other things, are chosen, as exhibiting a connected series of objects, forming a good ground for proper arrangement and classification.

"The senses are, in this series, likewise brought under more careful consideration; the lesson on cloves may be considered a fair specimen of the lessons in the fourth series. When a child has been found competent to understand, pretty well, the lessons of the first four series, and has acquired an ability of generalizing correctly, and of

arranging and classifying objects into proper groups, he may now be considered competent to enter on the exercises of the last series. These are of a nature more complex, and requiring a greater exercise of thought. Articles of domestic manufacture, articles of domestic use, natural and artificial productions, metals, earths, any thing, in short, may be presented to the pupil in a more scientific point of view than before.

The children are required to make what observations they can, upon the objects before them, and the teacher adds to their stock of information, any further particulars which seem best calculated to amuse or instruct them. The teacher, in conclusion, sums up all the knowledge that has been gained. An examination ensues, and at the conclusion, the children are required carefully to note down the results in writing.

"Throughout the whole of these lessons, it is the intention of the author, that opportunities should be continually given for exercise in composition.

"In the earlier lessons, the pupils are required to write down the names of parts and qualities, merely for the purpose of habituating them to the right spelling of words, and the understanding of their real meaning.

"In the more advanced lessons, however, of the fourth and last series, considerable exercise is given in *composition;* and thus these lessons have a value in them superior to that which might be acknowledged by a superficial observer.

"They lead not only to the direct formation, combination, and classification of ideas, but also to an accurate description of them, in written language. The following is a specimen of one of the lessons of the fifth series.

LESSON 15.

PARCHMENT.

'Parchment is the skin of sheep or goats, prepared in the following manner: — The wool is stripped off the skin, which is then taken to the lime pit. After this, it is stretched as tight as a drum, upon a frame, and the remaining flesh pared off with a keen-edged instrument; a kind of white stone or chalk, reduced to a fine powder, is then spread upon the surface; and a large pumice stone, flat at bottom, is rubbed over it, which scours off the remainder of the flesh. The knife is once more applied to the skin, which is moistened and rubbed again with the pumice stone, until the inner side is smooth. The outside then undergoes a similar operation. It is now left to dry, and afterwards is taken off the frame, and given to the parchment maker. He first scrapes it dry on an instrument called a summer, (which is a calf's skin well stretched on a frame,) with a sharp iron tool, until one half of the thickness of the skin is pared off. The pumice stone is next passed over it on both sides, till it is rendered quite smooth.

'Parchment was in use long before the invention of paper. Wills, and other documents, intended to be preserved for any length of time, are written on it. It is also used for drums.'

The general principles recognized in the above extracts, and on which the lessons on objects, as above expounded, are formed, I believe to be the true basis of instruction.

In Holland, it is said, they use in their schools the weights, measures, and coins of the country, not as a means of conveying useful knowledge, but of mental exercise and cultivation.

We might, with great advantage, keep in our schools, specimens of natural and artificial productions, for the special purpose of using them in this way; and teachers would do well to invite their pupils to make collections, for a *museum*, of whatever came in their way which they thought curious and suitable for the purpose.

They would, by such means as these, be stimulated to efforts at intellectual labor, which they would not be likely to make under the ordinary discipline of our schools, as at present conducted. By a partial use, indeed, of the means here pointed out, an impulse might frequently be given to thought in a sprightly mind, which would not cease to operate, but lead to high attainments and eminent cultivation.

Education is better understood, and more rationally conducted in Germany, than in any other country, and we should do well to make ourselves acquainted with the modes of instruction which generally prevail there, but particularly with the Prussian systems. This latter country is pre-eminently distinguished for the perfection to which the discipline of its schools and colleges has been brought.

Teaching is there a profession, which has to be acquired by previous discipline and preparation, similar to that of the so-called learned professions, here and elsewhere. The government authorities of that country, have caused to be established, *normal schools*, where the future teacher is instructed in his duties by a systematic training, not merely in the acquisition of learning and knowledge, but in the means best adapted to the purpose of communicating it.

Their methods are pronounced by all competent judges, and those who have seen them in operation and witnessed their results, to be such as are worthy of being held up as models to the rest of the world. Mr. Horace Mann, a distinguished friend of education, and secretary of the Board of Education, Massachusetts, has recently returned from an educational tour in Europe, undertaken, principally, for the purpose of making himself acquainted with the methods of teaching in different countries. He visited England, Scotland, France, Germany and Prussia, and on his return home, he embodied in his customary annual report, as secretary, the experiences and influences which his tour had yielded him.

That portion of the report which relates to European schooling, has been republished in England, and the following notice of it, so far as Prussia is concerned, is extracted from a late English Periodical:—

"The whole Prussian system, but especially the people's school part of it, on which last Mr. Mann bestowed most of his attention, forced on him, he tells us, 'a deep sense of the vast difference in the amount of general attainment and talent devoted to the cause of popular edu-

cation in that country as compared with any country or state I had ever seen.' Any image, even a faint one, of what it was Mr. Mann saw in the Prussian schools to produce this impression, it would be impossible to communicate in the limits to which we are restricted. We must refer our readers for satisfaction on this head, to Mr. Mann's volume itself, where, even from his hasty and fragmentary sketch they may form some tolerable idea of one of the noblest, and most instructive of phenomena which this civilized Europe, as it lies around us, anywhere presents.

"The praises of the Prusssian teachers, Mr. Mann is never weary of singing: 'if brought together in one body,' he says, 'they would form, I believe, as dignified, intelligent, benevolent looking a company of men as could be collected from the same amount of population in any country.' To become admitted into this body, to run a chance even of being admitted into it, a course of training and testing is needful for the aspirant, such as is utterly unknown, utterly undreamt of here,—as long as, and ten times more arduous than the pretty severe probation which has to be undergone in Scotland, by candidates for the clerical profession.

"Over the Prussian teachers, again, stimulating and strictly supervising them, are a body of 'Inspectors,' of whom it may be sufficient to say, in the words of Mr. Mann, 'that they have evidently been selected from among the most talented and educated men in the community, and are persons such as would here be appointed presidents or professors of colleges, judges of the higher courts, &c.

"For the success of this system in actual practice, in each individual Prussian school, we must again refer the reader to Mr. Mann.—Meanwhile we cannot help quoting one little trait, which at the time of reading it, impressed itself deeply on ourselves, and may, perhaps, do the like for some of our readers also. Mr. Mann strolled by chance one morning into a country school, 'where, be it specially remarked, *everything about the premises, and the appearance both of teacher and children, indicated very narrow pecuniary circumstances.* As I entered, the teacher was just ready to commence a lesson or lecture on French history. He gave not only the events of a particular period in the history of France, but mentioned as he proceeded, all the cotemporary sovereigns of neighboring nations.'

"'The ordinary time for a lesson, here or elsewhere, was an hour. This was somewhat longer, for towards the close, the teacher entered upon a train of thought, from which it was difficult to break off, *and rose to a strain of eloquence which it was delightful to hear.* The scholars were all absorbed in attention. They had paper, pen and ink before them, and took very brief notes,'" &c.

Remember the "narrow pecuniary circumstances," and just fancy such an incident, or any akin to it, happening in a "country school" in Missouri! And yet this system spoken of in the terms of high commendation above used, was framed and instituted under a despotic government, although the wisest, by far, of that form, and was certain to result, sooner or later, in the conquest of freedom by the people.—And the advances which the Prussian people were gradually but safely making towards this most desirable consummation, even before the

late revolutionary occurrences in Europe—as yet of a doubtful tendency—may be cited as a sufficient answer to such remarks as the following: It was sometimes said, while the old state of things existed in Prussia,—What does all this matter: of what good is their education to the Prussians? are they not a nation of slaves?

Those who gave utterance to such sentiments as these, belong to the class that expects good laws to be produced mechanically by a good constitution of the legislature, and, that wise government will proceed from free institutions, with or without that enlightenment of the people which gives its life and spirit to freedom. But there is no democratic any more than there is a royal road to good government; its only guaranty is in the intelligence and good education of the people at large.

If the Prussians really were politically "slaves," that unhappy condition of theirs was by no means due to their system of education, but rather existed in spite of it. The same year, or nearly the same year, which gave them their system of education, forever abolished serfdom in Prussia, and handed over some enormous proportion of its soil from the possession of the noble (and idle) owners, to that of its industrious peasant tillers. Further than this, I beg leave to remark, that even according to American notions of freedom, the Prussians, it must be admitted, were fast ceasing to be a nation of slaves prior to their late revolution, as must be evident to any one acquainted with the proceedings of their States-general or Diet in 1846—proceedings almost as bold, and in their probable results as destructive to absolutism, as those of the continental Congress of 1776 itself, in our own country.

What will be the future condition of the Prussians, and whether a people so little conversant with public affairs as they must necessarily be, will make a rational use of liberty so suddenly achieved, is an enquiry which no man can undertake satisfactorily to answer; time must show. Experience teaches that all great changes in the condition of a people, and particularly organic changes in their government, can only be beneficial when gradually brought about, and that a transition, *per saltum*, from despotic to free institutions, however preferable in themselves the latter may be, are always of doubtful tendency, and that in such a case, disastrous rather than happy results are to be apprehended. But assuredly, such an education as the Prussian youth have universally received, and, it is to be hoped, will continue to receive, makes their prospect for obtaining good and stable government better than that of others similarly circumstanced can possibly be.

We must recollect too, that, if in order to win freedom, it is necessary for a people to be enlightened by a good education, it is no wit less necessary for them to be so in order to preserve their freedom after it is won; and that, as much liberty as we now claim for ourselves, and happily enjoy, under our present free institutions, if we continue to be as indifferent to the cause of education, and as listless in all that relates to its progress and advancement, as we certainly have been in comparison with some other people, we shall be in greater danger of becoming slaves than many who have not half the immunities to boast of.

But I have been led by these considerations somewhat wide of my direct purpose. There are yet a few other remarks which I wish to extract from the same notice of Mr. Mann's interesting publication, above referred to. They relate to what he observed in Scotland, and are as follows:—

"Mr. Mann pays a just tribute to the knowledge and preceptorial skill of the poorly paid teachers of Scotland, whose 'thoroughness in teaching the intellectual part of reading,' for instance 'furnishes,' he thinks, 'a model worthy of being copied by the world.' His graphic notice of a class of little Scotch boys during school hours, and the state of "intense excitement," in which, what with the energy of the teachers, what with the stimulous of reward, they go through their business, is one of the liveliest passages of the book, and will astonish the English reader.

"'To an unaccustomed spectator,' says Mr. Mann, closing his description, "on entering one of these rooms, all seems uproar turbulence, and the contention of angry voices,—the teacher traversing the space before his class in a state of high excitement; the pupils springing from their seats, darting to the middle of the floor, and sometimes with extended arms, forming a circle around him, two, three, or four deep,—every finger quivering from the intensity of their emotions—until some more sagacious mind, out-stripping its rivals, solves the difficulty,—when all are in their seats again, as though by magic, and ready for another encounter of wits."

This brief but most interesting account, comprising but one incidental example of what is effected daily, no doubt, in the schools of Scotland, may serve to convince us that there *are* means for arousing the thinking faculties of youth to intensity, even when resorted to on the occasion only of an ordinary reading lesson, as appears to have been the case in the above instance.

We have not there a mere inference drawn from theory, of what *would* or *might* be the results of any prescribed mode of discipline, but a statement of facts in relation to what is actually *done* on views and principles identical with those I have been engaged in developing, and which I have so much urged upon the readers of 'the Journal,' in this and preceding numbers.

And why cannot we do something of the same kind here in Missouri; in St. Louis and other counties of the State? We can attempt it at least, and if we attempt it in good earnest, and with enlightened views, I, for my part, see no reason to doubt of success: with competent teachers and the approbation of the communities who employ them there can be none, otherwise the difficulties, indeed, might be insuperable.

Before anything can be done or attempted, therefore, parents and others concerned in the conduct and government of our schools, must be conciliated, and reconciled to any proposed change of system that might be thought expedient or desirable. This can only be effected by representations publicly made, and similar to those which I have given throughout the many articles inserted in 'The Journal.'

Such views as I have presented, and which I trust will not fail to be recognised as generally correct, if not indisputable—since sanctioned

by the best authorities—must be widely disseminated and perseveringly urged before we can expect to establish a thoroughly rational and efficient system of instruction in any of our district or other schools.

Without these efforts at enlightment, the opposition of parents, guardians, trustees, &c., to a mode of teaching, the merits of which they would, for the most part, be unacquainted with, and which in itself would be so much at variance with their experience and their notions of what it is that constitutes education—the opposition of these parties generally, would, I say, be inevitable, and render abortive any attempts to introduce a novel system into our schools; and a *forced* system among such a people as we Americans, is not to be thought of.

The prevailing idea is, that if a child does not make progress according to the popular notions of progress, that is, turn over a certain number of pages, and handle or pass through a certain number of text or '*class*' books in a given time, he is not advancing in his studies.

But if his teacher will but make him expert in all that relates to the mechanical routine of his daily tasks—familiarize him with *rules*, not reasons, and impress his memory with hard names, and learned phrases, not understood; but especially if his teacher will drill him dilligently in questions ready made, and supply him with ready made answers, he may then expect to be lauded as a most admirable disciplinarian; although mind and understanding have been the last things to be regarded, and scarcely ever been brought into requisition.

Such, frequently, is the effect of our prevailing system, and of the prejudices in favor of usage.

Among the considerations most important in the work of reform, are the character and qualifications of the teachers we employ. These should occupy the first place in our regard.

We should select, or, if necessary, procure from a distance, men of the most liberal views, and best cultivated minds, and this without regard to the amount of compensation we may have to pay. Such men will indeed seek to be remunerated very differently from those we are in the habit of employing.

What are the men we invest with the important trust—that of forming the minds and morals of our children? Young men of uninformed minds, students at law and medicine, and others merely seeking a temporary support from the calling; broken down tradesmen, ruined merchants, and every grade of poor gentlemen offer themselves and are accepted, with scarcely an enquiry further than what relates to the pecuniary terms of the engagement.

Indifference to the qualifications of teachers, or a mistaken economy with regard to their suitable remuneration, appears to be a prevalent fault throughout the Union. One would have thought that in Massachusetts, where education is understood as well, if not better than in any other State, the case would have been different. The following observations, however, which I find in an article written by Dr. Channing, seem to indicate the contrary. He writes as follows:

"One of the discouraging views of society, at the present moment, is, that whilst much is said of education, hardly any seem to feel the

necessity of securing to it the best minds in the community, and of securing them at any price.

"A juster estimate of this office begins to be made in our great cities; but generally, it seems to be thought that anybody may become a teacher. The most moderate ability is thought to be competent to the most important profession in society. Strange, too, as it may seem, on this point, parents incline to be economical. They who squander thousands on dress, furniture, amusements, think it hard to pay comparatively small sums to the instructor; and through this ruinous economy, and this ignorance of the dignity of a teacher's vocation, they rob their children of aid, for which the treasures of worlds can afford no compensation."

Again, the same ingenious and able writer remarks—"We know not how society can be aided more than by the formation of a body of wise and efficient educators. We know not any class which would contribute so much to the stability of the State, and to domestic happiness. Much as we respect the ministry of the gospel, we believe that it must yield in importance to the office of training the young."

COMMERCIAL STATISTICS.

COMMERCE BETWEEN THE UNITED STATES AND CUBA.

In examining into the nature and extent of our commerce with Cuba, we have observed an important fact, for which we are unable to account. By reference to the following tables, it will be seen that our exports to Cuba remain about the same, in amount, as they were from 1826 to 1830. Indeed, a most remarkable uniformity has been maintained throughout a perid of more than twenty years. While, on the other hand, our imports from that island have increased more than two hundred per cent in the same period. From 1826 to 1830, a perid of five years, our exports were nearly double the imports; but for the last two years the amount of imports nearly double the exports. During the whole of this period, while the amount of our exports to Cuba has remained stationary, her imports, from other countries, have been increasing, and are now about double what they were in 1826. The imports into the United States, from Cuba, in 1848, exceeded the exports nearly $6,000,000, leaving this sum to be paid from our commerce with other countries. This state of things works well enough, perhaps, while the world is at peace, but suppose a war between this

country and Great Britain, in such a case, what would be the state of our commerce with Cuba? We should be compelled to limit our imports to the amount of our exports, or pay the greater part of the balance against us in the precious metals.

We should be much pleased if some of our mercantile friends, or some of our statesmen, who understand this subject, would inform us why it is, that, our exports to the Island of Cuba do not increase in proportion to the increase of the commerce of that country; and why there has been such a rapid increase, of late years, in our imports.

For the purpose of showing the nature of our commerce with Cuba, we have made up the following tables, from the report of the Secretary of the Treasury, for the year 1848.

STATEMENT OF EXPORTS *from the United States to Cuba, for the year ending 30th June*, 1848.

Apples,	Value,	$7,973
Ashes, pot and pearl,	"	410
Artificial flowers and jewelry,	"	246
Beef and tallow,	"	110,010
Beer, porter, ale and cider,	"	51,929
Books and maps,	"	1,256
Brick and lime,	"	8,147
Brushes,	"	680
Biscuit or ship bread,	"	9,,66
Butter and cheese,	"	84,751
Cables and cordage,	"	943
Candles, spermaceti,	"	44,114
Candles of tallow, and soap,	"	114,727
Coaches and other carriages,	"	17,908
Coal,	"	1,985
Combs and buttons,	"	1,231
Copper and brass, and copper manufactured,	"	15,206
Corn, Indian,	"	125,534
Corn meal,	"	22,905
Cotton,	"	314,462
Earthen and stone ware,	"	453
Fish, dried or smoked,	"	263,704
" pickled,	"	18,101
Flour,	"	154,185
Glass,	"	19,547
Gold and silver coin,	"	50
Gunpowder,	"	18,076
Hats,	"	1,119
Hops,	"	162
Horses and mules,	"	7,775
Household furniture,	"	76,804
Ice,	"	4,760
Indigo,	"	1,000
Iron, pig, bar, and nails,	"	102,036

Iron castings,	Value.	617,149
Lead,	"	186
Leather, boots and shoes,	"	7,141
Leather and morocco skins,	"	7,825
Lumber,	"	86,934
Marble and stone,	"	2,183
Masts and spars,	"	2,517
Medicinal drugs,	"	42,514
Molasses,	"	153
Musical instruments,	"	7,216
Naval stores,	"	4,983
Oak bark, and other dye,	"	4,731
Oil, sperm,	"	46,581
" whale and other fish,	"	47,841
" Linseed and spirits of turpentine,	"	13,182
Paper and stationery,	"	23,647
Pewter and lead, manufactured,	"	1,239
Pork in bbls., hams, bacon, lard and hogs,	"	1,086,026
Potatoes,	"	52,296
Printing presses and type,	"	1,510
Paints and varnish,	"	6,386
Rice,	"	718,492
Rye, oats, pulse and other small grain,	"	17,142
Saddlery,	"	11,951
Salt,	"	2,210
Skins and furs,	"	319
Snuff and tobacco, manufactured,	"	15,573
Spirits, from molasses,	"	22
Spirits, from grain,	"	120
Staves, shingles, boards and hewn timber,	"	459,603
Tin, manufactures of,	"	2,039
Tobacco,	"	1,626
Trunks,	"	1,779
Umbrellas and parasols.	"	15
Vinegar,	"	1,404
Wearing apparel,	"	189
Whale bone,	"	762
Wheat,	"	1,174
Wood, all articles manufactured of,	"	1,367,029
Articles of manufacture not enumerated,	"	73,823
Other articles not enumerated,	"	54,191
Total exports of domestic production,		$6,432,380

EXPORTS OF FOREIGN PRODUCTION.

Gold coin,	$106,892
Silver "	3,107
Other articles,	354,334
Total of foreign exports,	$464,333
Total of domestic and foreign exports,	$6,896,713

IMPORTS *from Cuba to the United States, for the year ending 30th June*, 1848.

Sugar, brown,	lbs.,	174,979,362	Value,	$6,442,661
" white clayed, &c.,	"	6,034,310	"	309,399
" loaf and refined,	"	44,435	"	3,082
Molasses, gallons,		28,773,279	"	2,845,714
Coffee, lbs.		2,258,710	"	139,543
Tobacco, unmanufactured,	lbs.	3,201,127	"	375,168
" manufactured,	"	12,461	"	1,546
Cigars, lbs.		1,316,515	"	1,329,056
Dye wood,			"	37,066
Raw hides,			"	12,464
Specie, gold,			"	535,083
" silver,			"	232,206
Other articles,			"	498,643
				$12,853,472
Excess of imports over exports,				$5,956,759

The following table showing the amount of the exports from the United States to Cuba, and the imports from that Island, since the year 1825, is made up from McGregor's Progress of America, from the American Almanac, and, from the reports of the Secretary of the Treasury of the United States.

YEARS.	EXPORTS.	IMPORTS.
1826	$5,632,808	$3,894,597
1827	7,702,695	4,107,449
1828	6,599,096	3,176,964
1829	5,734,765	3,191,535
1830	4,791,544	4,266,782
1831	4,690,308	3,971,502
1832	3,542,036	3,168,466
1833	4,461,472	4,386,885
1834	3,690,101	3,824,724
1835	5,406,919	4,365,569
1836	6,553,281	5,513,924
1837	6,548,957	5,792,623
1838	6,202,002	5,574,591
1839	6,132,794	5,528,045
1840	5,654,125	566,730
1841	5,739,082	11,567,027
1842	6,200,221	5,282,574
1843	3,326,797	5,015,933
1844	5,238,505	9,930,421
1845	6,564,754	6,804,414
1846	6,977,766	8,159,632
1847	6,977,706	12,394,867
1848	6,896,713	12,853,472

The following table showing the amount of exports, and imports of the Island of Cuba from the year 1826 to 1842 inclusive, is taken from McGregor's Progress of America; and for the subsequent portion of the table we are indebted to the Merchants' Magazine.

Table showing the amount of exports and imports of Cuba, to, and from all countries from the year 1826 to 1847 inclusive.

YEARS.	EXPORTS.	IMPORTS.
1826	$183,809,830	$14,925,754
1827	14,286,192	17,356,854
1828	13,114,362	19,534,922
1829	13,932,405	18,695,856
1830	15,870,968	16,171,566
1831	12,918,711	15,548,791
1832	13,595,017	15,198,465
1833	13,006,100	18,511,122
1834	14,487,055	18,563,300
1835	14,059,246	20,722,072
1836	15,398,345	22,551,960
1837	20,346,407	22,910,357
1838	20,471,102	24,729,875
1839	21,481,848	25,217,796
1840	25,901,783	24,700,189
1841	24,814,720	24,630,629
1842	26,684,701	24,637,527
1843	25,029,792	23,422,096
1844	25,426,591	25,056,231
1845	187,92,812	28,007,590
1846	22,000,588	22,625,399
1847	27,998,770	32,389,119

Population of Cuba at different periods.—In 1775—170,-370. In 1791—272,140. In 1817—551,998. In 1827—704,487. In 1841—1,007,664. According to the census of 1841 there were of the white population, 418,291. Free people of color 86,054. Free negroes 64,784. Slaves 442,495: of these 425,521 were negroes and 10,974 colored.*

*McGregor.

STATEMENT OF DOMESTIC EXPORTS, IN 1847–'48, FROM THE UNITED STATES TO ALL COUNTRIES.

	WHITHER EXPORTED.	TOTAL VALUE OF MERCHANDIZE.				
		In American vessels.	In foreign vessels.	To each country.	To the dominions of each power.	
		Dollars.				
1	Russia,	998,962	48,620	1,047,582	1,047,582	1
2	Prussia,	——	145,074	145,074	145,074	2
3	Sweden and Norway,	150,903	475,069	625,972	701,468	3
4	Swedish West Indies,	71,052	4,444	75,496		4
5	Denmark,	3,889	160,772	164,661	1,041,630	5
6	Danish West Indies,	783,196	93,773	876,969		6
7	Hanse Towns,	604,045	3,252,631	3,856,676	3,856,676	7
8	Holland,	740,363	855,087	1,595,450	2,161,522	8
9	Dutch East Indies,	116,767	17,138	133,905		9
10	Dutch West Indies,	293,326	23,340	316,666		10
11	Dutch Guiana,	115,501	——	115,501		11
12	Belgium,	1,589,899	399,865	1,989,764	1,989,764	12
13	England,	42,784,681	20,143,343	62,928,024	80,306,148	13
14	Scotland,	1,309,457	1,145,969	2,455,426		14
15	Ireland,	811,192	1,568,099	2,379,291		15
16	Gibraltar,	282,365	28,035	310,400		16
17	Malta,	33,128	——	33,128		17
18	British East Indies,	510,284	——	510,284		18
19	Cope of Good Hope,	100,338	——	100,338		19
20	Honduras,	234,857	14,791	249,648		20
21	British Guiana,	534,204	60,910	595,114		21
22	British West Indies,	3,573,012	771,524	4,344,536		22
23	British American colonies,	2,695,296	3,704,663	6,399,959		23
24	France on the Atlantic,	12,754,788	1,405,010	14,159,798	15,946,680	24
25	France on the Mediterranean,	1,151,227	63,860	1,215,087		25
26	French West Indies,	426,471	42,882	469,353		26
27	French Guiana,	48,737	——	48,737		27
28	Miquelon and other French fisheries,	33,079	19,787	52,866		28

29	French African ports,	—	839	839		29
30	Spain on the Atlantic,	417,734	180,063	597,797		30
31	Spain on the Mediterranean,	354,376	1,387,098	1,741,474		31
32	Teneriffe, and other Canaries,	7,802	2,119	9,921		32
33	Manilla and Philippine islands,	36,949	—	36,049	9,620,243	33
34	Cuba,	6,341,147	91,233	6,432,380		34
35	Other Spanish West Indies,	777,551	24,171	801,722		35
36	Portugal,	54,603	57,657	112,260		36
37	Madeira,	84,071	26,771	110,842		37
38	Fayal and other Azores,	3,660	—	3,660	328,485	38
39	Cape de Verdes,	101,723	—	101,723		39
40	Italian ports not specified,	559,136	141,977	1,101,113	1,101,113	40
41	Sicily,	12,131	5,623	17,754	17,754	41
42	Sardinia,	150,708	24,875	175,583	175,583	42
43	Tuscany,	5,197	—	5,197	5,197	43
44	Trieste, and other Austrian ports on the Adriatic,	1,370,013	331,482	1,701,495	1,701,495	44
45	Turkey, Levant, &c.	114,830	—	114,830	114,830	45
46	Hayti,	871,899	65,687	937,586	937,586	46
47	Mexico,	1,997,913	97,572	2,095,485	2,095,485	47
48	Central Republic of America,	29,995	4,945	34,940	34,940	48
49	New Grenada,	4,234	74,931	79,165	79,165	49
50	Venezuela,	373,327	26,903	400,230	400,230	50
51	Brazil,	2,924,728	168,008	3,092,736	3,092,736	51
52	Cisplatine Republic,	272,994	66,865	339,859	339,859	52
53	Argentine Republic,	176,614	32,089	208,703	208,703	53
54	Chili,	1,703,625	—	1,703,625	1,703,625	54
55	Ohina,	2,063,625	—	2,063,625	2,063,625	55
56	Peru,	113,502	11,116	124,618	124,618	56
57	West Indies, generally,	129,741	3,220	132,961	132,961	57
58	South America, generally,	86,385	—	86,385	86,385	58
59	Asia, generally,	266,452	—	266,452	266,452	59
60	Africa, generally,	681,415	89,974	771,389	771,389	60
61	South Seas and Pacific,	305,118	—	305,118	305,118	61
	Total of Domestic Exports,	95,544,217	37,359,904	132,904,121	132,904,121	
	Value of Exports of foreign merchandize,				21,128,010	
	Grand Total,				$154,032,131	

TREASURY DEPARTMENT, *Register's Office, January* 20, 1849.

DANIEL GRAHAM, *Register*.

STATEMENT OF IMPORTS INTO THE UNITED STATES, FOR THE YEAR ENDING JUNE 30, 1848.

	WHENCE IMPORTED.	VALUE OF MERCHANDIZE IMPORTED.						
		Free of duty.	Paying duties ad valorem.	Total.	In American vessels.	In foreign vessels.	From the dominions of each power.	
		Dollars.						
1	Russia,	19,394	1,299,690	1,319,084	1,319,084	——	1,319,084	1
2	Prussia,	——	22,817	22,817	22,817	——	22,817	2
3	Sweden and Norway,	1,513	749,304	750,817	101,877	648,940	764,602	3
4	Swedish West Indies,	9,627	4,158	13,785	13,785	——		4
5	Denmark,	60	19,557	19,617	——	19,617	555,355	5
6	Danish West Indies,	144,244	391,494	535,738	532,548	3,190		6
7	Hanse Towns,	31,524	6,261,756	6,293,280	1,925,732	4,367,548	6,293,280	7
8	Holland,	213,222	1,204,686	1,417,908	575,722	842,186		8
9	Dutch West Indies,	106,825	346,790	453,615	426,046	27,569	2,172,166	9
10	Dutch East Indies,	156,818	92,528	249,346	249,346	——		10
11	Dutch Guiana,	——	51,297	51,297	51,297	——		11
12	Belgium,	11,799	1,313,262	1,325,061	922,269	402,792	1,325,061	12
13	England,	3,147,298	56,616,204	59,763,502	49,795,323	9 968,179		13
14	Scotland,	20,900	1,645,794	1,666,694	1,000,388	666,306		14
15	Ireland,	126,032	289,891	415,923	353,828	62,095		15
16	Gibraltar,	——	4,445	4,445	3,316	1,129		16
17	Malta,	15	369	384	384	——		17
18	British East Indies,	1,389	2,068,243	2,069,632	2,069,632	——	69,011,085	18
19	Cape of Good Hope,	529	59,902	60,431	60,431	——		19
20	British Honduras,	105,802	79,882	185,684	181,429	4,255		20
21	British Guiana,	12,577	11,677	24,254	23,587	667		21
22	British West Indies,	464,540	694,023	1,158,563	917,171	341,392		22
23	British American colonies,	1,228,223	2,418,244	3,646,467	1,234,168	2,412,299		23
24	Ionian Islands,	——	15,106	15,106	15,106	——		24
25	France on the Atlantic,	340,613	26,719,101	27,059,714	24,083,430	2,976,284		25
26	France on the Mediterranean,	11,091	1,025,226	1,036,317	753,931	282,386		26
27	French Guiana,	29,741	34,247	63,988	63,988	——	28,287,791	27

28	Miquelon and French fisheries,	—	733	733	733	—		28
29	French West Indies,	107,376	19,663	127,039	120,492	6,547		29
30	Spain on the Atlantic,	55,429	221,676	277,105	221,715	55,390		30
31	Spain on the Mediterranean,	34,345	885,001	919,346	729,897	189,449		31
32	Teneriffe, and other Canaries,	—	35,061	35,061	32,903	2,158	17,388,307	32
33	Manilla and Philippine islands,	10,382	1,186,645	1,197,027	1,162,138	34,589		33
34	Cuba,	1,004,446	11,849,026	12,853,472	12,221,946	631,526		34
35	Other Spanish West Indies,	56,949	2,049,347	2,106,296	2,077,162	28,834		35
36	Portugal,	3,944	210,838	214,782	144,023	70,759		36
37	Madeira,	—	9,432	9,432	9,432	—		37
38	Fayal, and other Azores,	784	10,654	11,438	11,438	—	235,877	38
39	Cape de Verdes,	—	225	225	225	—		39
40	Italy,	58,712	1,557,388	1,616,100	1,344,166	271,934	1,616,100	40
41	Sicily,	5,001	613,028	618,029	554,469	63,560	618,029	41
42	Trieste and Adriatic ports,	2,537	383,276	385,813	383,672	2,141	385,813	42
43	Turkey and Levant Ports,	590	405,438	406,028	406,005	23	406,028	43
44	Hayti,	1,074,594	292,580	1,367,174	1,332,984	34,190	1,367,174	44
45	Mexico,	865,233	716,014	1,581,247	1,507,328	73,919	1,581,247	45
46	Central America,	—	18,272	18,272	18,272	—	18,272	46
47	New Grenada,	99,142	114,154	213,296	104,228	109,068	213,296	47
48	Venezuela,	636,709	588,902	1,225,611	1,143,103	82,508	1,225,611	48
49	Brazil,	5,998,162	1,994,486	7,992,648	6,765,425	1,227,223	7,992,648	49
50	Cisplatine Republic,	26,192	496,872	523,064	338,970	184,094	523,064	50
51	Argentine Republic,	2,836	1,023,261	1,026,097	905,750	120,347	1,026,097	51
52	Chili,	65,854	1,244,617	1,310,451	1,095,284	215,167	1,310,451	52
53	Peru,	76,660	241,099	317,759	315,938	1,821	317,759	53
54	China,	6,225,914	1,857,582	8,083,496	8,083,372	124	8,083,496	54
55	West Indies, generally,	3,358	7,236	10,594	10,594	—	10,594	55
56	Asia, generally,	15,515	239,885	255,400	255,400	—	255,400	56
57	Africa, generally,	100,383	555,202	655,585	636,094	19,491	655,585	57
58	South Seas and Pacific ocean,	1,800	8,160	9,960	9,960	—	9,960	58
59	Sandwich Islands,	—	6,508	6,508	6,508	—	6,508	59
60	Other places,	—	371	371	371	—	371	60
	Total,	22,716,603	132,282,325	154,998,928	128,647,232	26,351,696	154,998,928	

TREASURY DEPARTMENT, *Register's Office, January* 20, 1849.

DANIEL GRAHAM, *Register.*

JOURNAL OF INTERNAL IMPROVEMENT.

PACIFIC RAILWAY CONVENTION AT MEMPHIS.

The following resolutions adopted by the Memphis Convention will be read with interest by all who desire to promote the glory of our common country.

The last resolution, recommending the survey of a route from San Diego to some point on the Mississippi, between the mouth of Red river and the Ohio, seems to have been strongly contested; and, did it stand alone as the prominent and leading idea of the Convention, we should esteem it as highly objectionable, and calculated to defeat the great project of a railway to the Pacific ocean, at least for the present. But viewing it, simply, as a request that Congress shall cause the route to be examined, we do not consider it as modifying the main resolutions; and hence, we are pleased that it was adopted. Let the country have all the information in respect to the various routes proposed that can be obtained—to deny this may prove fatal to the enterprise—and if this route be highly favorable and none other should be found practicable, without incurring an unreasonable expense, then we say let us construct the road on it: the system of improvement this side of the Rocky mountains will, in time, connect with the main trunk, be it located where it may.

The following States were represented in the Convention namely: Alabama, Georgia, Kentucky, Louisiana, Mississippi, New York, Texas, Tennessee, Virginia, South Carolina, Arkansas, Pennsylvania, Illinois and Missouri, fourteen in all. Twenty States have been represented in the St. Louis and Memphis Conventions; and it is fair to conclude, beyond a doubt, that the heart of the nation is resolved on the accomplishment of this great enterprise.

1. *Resolved*, That it is the opinion of this Convention that it is the duty of the General Government to provide at an early period, for the constructon of a National Railroad from the Mississippi river to the Pacific ocean.

2. *Resolved*, That to facilitate the accomplishment of this object, in the opinion of this Convention, it is the duty of the General Government to constitute an efficient and competent corps of Engineers to make complete explorations and surveys of all the routes that have been designated by public opinion as proper for the line of this road.

3. *Resolved*, That after the proper surveys shall have been completed, that, in the opinion of this Convention, it is the duty of the General Government to locate the line of the road; and in making the location *that* route should be selected which is easiest of access, best calculated to subserve the purposes of national defence, most convenient to the people of, and as far as practicable, central to, the United States, and upon which a railroad can be constructed on the cheapest and best terms.

4. *Resolved*, That to carry into effect the object of the first resolution, in the opinion of this Convention, the public lands of the United States constitute a legitimate and proper fund.

5. *Resolved*, That after the construction of the National Railway trunk from the Mississippi river to the Pacific ocean, in the opinion of this Convention it is the duty of Congress to aid by the appropriation of the national domain, in the con-

struction of such branch railroads as will best connect it with the Northern Lakes and the great thoroughfares leading to the Atlantic ocean; and with such other points on the Mississippi river as will connect it with the lines of improvement completed, or in the course of construction—and also to aid in the construction of branches from the main trunk to suitable points on the Gulf of Mexico, either east or west of the Mississippi river.

6. *Resolved*, That in the opinion of this Convention it is the duty of the General Government to provide, under liberal conditions, for a connection between the main trunk of this National Railroad and all railroads now made or which may hereafter be constructed by the authority of the several States and Territories of the Union.

Resolved, That as an important means, a necessary preliminary to the construction of a railroad, it is the first duty of Congress to take necessary measures for the establishment of military posts from the western confines of our western States, along the southern boundaries of our Republic and our Indian frontier to the Pacific ocean—that these posts should be established in all proper places, not far distant from each other, and that civilized and productive settlements should be encouraged around them by sales, and the grant of pre-emption rights of the public lands to actual settlers, and by such other encouragements as may be deemed necessary, so that by these means, ample opportunities may be afforded to our engineers for the immediate survey and reconnoissance of our possessions lying between our western and southern States and the Pacific ocean, and so, also, that by these means, safe, practical roads, one or more, with facilities of travel, may be immediately formed for our citizens and for the transportation of troops and munitions of war, &c., across our own territories, from the Atlantic to the Pacific shores, and in order that our Government may fulfil its recent treaty stipulations with Mexico.

Your committee would further report, that in their opinion it would be highly advantageous to the commerce of this country, and add greatly to its political power and influence, if an immediate connection by railroad or canal, could be obtained between the Gulf of Mexico and the Pacific ocean. Many projects of greater or less promise for the purpose of constructing the necessary works to complete such a communication have been of late agitated, and without, in the present state of our knowledge upon the subject, pretending to decide upon their relative merits, they beg leave to recommend the adoption of the following resolution:

Resolved, That while the contemplated Railroad across the continent is being constructed, a present communication between the States of this Union and the American and Asiatic coasts of the Pacific ocean is of vast importance to every portion of this country; that such communication can be obtained by ship—canal or railroad across the Isthmus of Tehuantepec, Nicaragua or Panama, or across them all, which railroads or canals may be constructed by private enterprise, and this Convention, in order to encourage the undertaking and completion of such works, recommend the passage of a law by the Congress of the United States, directing the Postmaster General, Secretary of War, and Secretary of the Navy, to make annual contracts for the transportation of the mails, troops, and military, and naval stores of the government, from the Atlantic to the Pacific posts of the country, by the shortest, speediest and cheapest route.

The committee on resolutions, to which was referred the resolution that declares "that in the event of the appropriation by Congress of a considerable portion of the proceeds of the public lands to the construction of a railroad from the Mississippi river to the Pacific ocean, that at the same time liberal appropriations of the public lands lying within the limits of the States should be made to aid them respectively, in their works of Internal Improvement," have had the same under consideration, and have instructed me to report: "that the claim of the States is equitable, because the lands of the United States within the States bear no charges for local improvements, nor for the expenditure of the State government, and receive benefit from both sources of expenditure." They therefore recommend the adoption of the resolution:

Resolved, That in the event of the appropriation by Congress of a considerable portion of the public lands, or of the proceeds of the sales thereof, to the construction of a railroad from the Mississippi river to the Pacific ocean, that liberal appropriations of the public lands lying within the limits of the respective States, should be made to aid them in the construction of their works of internal improvement.

Resolved, That in the present state of our knowledge, we feel warranted in recommending to the particular attenion of the General Government for examination, the route commencing at San Diego on the Pacific ocean, crossing the Colorado of the west, running along the Gila river, or near it, in a direction to the Paso del Norte, and thence across the State of Texas to its northeastern boundary between 32 and 33 degrees of north latitude, terminating at some point on the Mississippi between the mouth of the Ohio river and the mouth of Red river.

STATISTICS OF THE PACIFIC RAILWAY CONVENTION WHICH ASSEMBLED IN ST. LOUIS ON THE 15TH DAY OF OCT., 1849.

Hon. ABNER T. ELLIS, of Indiana was chosen to preside over the proceedings in respect to the organization. Hon. S A. DOUGLASS, of Illinois was chosen President: but resigning his seat on the third day, the Hon. GEORGE DARSIE, of Pennsylvania was chosen to fill the vacancy

Vice Presidents.—Henry S. Geyer of Mo., Joseph Williams of Iowa, W. B. Scates of Ill , Samuel Emeson of Indiana, Henry J. Easten of Ky., Price Stewart of Tenn., C. C. Lathrop of La., Chas. Bracken of Wis., Samuel Farrer of Ohio, W. L. Tatten of Penn., A. K. Williams of N. Y., John Biddle of Michigan, J. F. Maury of Va., Robt. Chambers of N. J.

Secretaries.—A. B. Chambers of Mo., W. H. Wallace of Iowa, A. S. Mitchell of Ky., W. G. Minor of Mo., T. A. Stuart of Ill.

Marshal —Thornton Grimsly of Mo.

Number of Delegates.—From Missouri, 539; from Illinois, 379; from Iowa, 74; from Indiana, 37; from Kentucky, 9; from Tennessee, 9; from Louisiana, 1; from Wisconsin, 4; from Ohio, 8; from Pennsylvania, 18; from New York, 1; from Michigan, 1; from Virginia, 1; from New Jersey, 1:—1084 in all.*

Committee on Resolutions.—From Mo., Austin A. King, J. Loughborough, T. B. English; Ill., Richard Bond, W. B. Warren, Thos. Hayne; Iowa, V. P. Van Antwerp, G. H. Walworth, Wm. Thompson; Indiana, A. S. White, R. W. Thompson, A. T. Ellis; Ky., H. J. Easten, A. S. Mitchell, James Harper; Tenn., Le Roy Pope, Jr., E. J. Carroll, Geo. W. Smith; La., C. C. Lathrop; Wisconsin, Chas. Bracken, J. R. Murray. Edward Vaughn; Ohio, D. W. Deshler, J. H. Sullivan, Henry Stoddard; Penn., Geo. Darsie, Chas. Naylor, J. H. Reid; N. Y., A. K. Williams; Michigan, John Biddle; New Jersey, Robt. Chambers.

Committee on Memorial to Congress.—W. F. Bowden, of Wisconsin; A. R. Williams, N. Y.; Charles Naylor, Penn; J. F. Maury, Va.; John G. Low, Ohio; G. W. Lincoln, Ten.; O. H. Smith, Indiana; W. S Wait, Ill; John Biddle, Michigan; James Clark, Iowa; Thos. Allen, Mo.; Basil Duke, Ky.; C. C. Lathrop, La.; Robt. Chambers, N. J.

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*The number of delegates has been taken from the Mo. Republican. It is possible that when compared with the true list it may not be correct, but it is doubtless nearly so.

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ART. I.—THE AGE OF DISCOVERY.

A just conception of the genius of the age, and of the objects which occupy and attract the general mind, is necessary to a correct understanding of our individual interest:—nor can we properly appreciate our social relations, and the duties which they require, without observing the progress of events, and the changes which these events are continually producing in the philosophy and pursuits of mankind.

The obscure and patient labors of science, which for ages produced but little fruit, are now productive of results which excite emotions of wonder: the narrow horizon which bounded the vision of common minds has been enlarged; new and more exalted views of man's social destiny have been opened; a desire to attain a higher degree of civilization prevails; and the spirit of discovery may be regarded as the genius of the age. Under the influence of this spirit much has already been achieved; but when we reflect that each successive discovery emits a ray of light which leads on to another, we are ready to conclude that our feet still linger upon the threshold of the temple, wherein are stored the rich treasures of nature; and we rejoice in the hope that the time is near at hand when the veil which has so long concealed them from observation will be removed.

The age is auspicious, and cheering to the hopes of the philanthropist; and, calculated to inspire him with a higher degree of zeal in the cause of humanity: but, it is subject to tendencies which if not observed and counteracted, will neutralize the benefits which we may gain by discovery. The successful researches of science are calculated to make men credulous in respect to whatsoever relates to new sources of human subsistence, or to the enlargement of the powers required for their development. This tendency to admit whatsoever is affirmed, exposes men to the danger of confiding in facts which have been but superficially observed, or which, perhaps, never existed;

and, moreover, to be mislead by opinions and prejudices, groundless and absurd in their nature.

The bold experimenter and designing speculator, in opinions and property, are ever ready to take advantage of the credulity of others; and it is the office of science and philosophy to expose their false pretensions, and prevent the mischiefs which they design. There is another class, who, moved by vanity, and a love of the marvellous, draw upon their imaginations for facts, and publish them to the world as truths of great importance. As no mischief seems to be designed by this class of individuals, they might be permitted to make themselves ridiculous, were it not that their productions sometimes find a place in publications of established authority, and are consequently calculated to give a false coloring to the history of the age. We have, from time to time, noted a number of these publications, and filed them away, as matters of reference, to be used at a proper time in the course of our labors; and it has occurred to us that a few specimens might be interesting, and perhaps, profitable to our readers at present.

The first that we shall notice, is an article in the "Merchants' Magazine," published by Freeman Hunt, in the city of New York. The article is entitled, "NEW ORLEANS:—*Its Trade and Commerce.*" And as it does not appear to be credited to any other person, we infer that it was written by the editor. The following is the author's account of the geography and hydrography of the Valley of the Mississippi:—

"The position of New Orleans, as a vast commercial emporium, is unrivalled, as will be seen by a single glance at the map of the United States. As the depot of the West, and the half-way house of foreign trade, it is almost impossible to anticipate its future magnitude.

Take a view, for instance, of the immense regions known under the name of the Mississippi valley. Its boundaries on the west are the Rocky Mountains and Mexico; on the south, the Gulf of Mexico; on the east, the Alleghany Mountains; and on the north, the lakes and the British possessions. It contains nearly as many square miles, and more tillable ground, than all continential Europe, and, if peopled as densely as England, would sustain a population of five hundred millions—more than half of the present inhabitants of the earth. Its surface is generally cultivable, and its soil rich, with a climate varying to suit all products, for home consumption or a foreign market. The Mississippi is navigable twenty-one hundred miles—passing a small portage, three thousand may be achieved. It embraces the productions of many climates, and a mining country abounding in coal, lead, iron and copper ore, all found in veins of wonderful richness. The Missouri stretches thirty-nine hundred miles to the Great Falls, among the Flat Foot Indians, and five thousand from New Orleans. The Yellow Stone, navigable for eleven hundred miles, the Platte for sixteen hundred, and the Kansas for twelve hundred, are only tributaries to the latter river. The Ohio is two thousand miles to Pittsburgh, receiving into her bosom from numerous streams the products of New York, Pennsylvania, Ohio, Kentucky, Western Virginia, Tennessee, Indiana and Illinois. The Arkansas, Big Black, Yazoo, Red River, and many others, all pouring their

wealth into the main artery, the Mississippi, upon whose mighty current it floats down to the grand reservoir, New Orleans."

Now, it must be admitted that, here are some of the most marvelous discoveries of the age. First, we are informed that the immense region known under the name of the Mississippi Valley, contains nearly as many square miles as continental Europe. Lieutenant Maury, who is regarded as high authority, estimates the basin of the Mississippi to contain an area of only 982,000 square miles: and according to McCulloch, Europe embraces an area of 3,684,841 square miles.

It is possible, however, that the author may have been aware of the difference in the size of the two countries, and yet conclude that he might use the expression "nearly as large," with propriety. And, indeed, it would not be difficult to find authority for such license in many of the speeches and newspaper articles published in the United States. Having made the valley of such vast dimensions, it was necessary to make the rivers correspond so as to afford navigation to all its parts; and he proceeds to inform us that "the Mississippi is navigable twenty-one hundred miles — passing a small portage, three thousand may be achieved." We suppose the portage referred to is at the falls of St. Anthony, near the parallel of 45 deg. north latitude, and long. about 93 deg. west of Greenwich. Now, it is impossible to conceive how a navigation of nine hundred miles can be achieved on the Mississippi, above the falls of St. Anthony, otherwise than by making a number of trips up and down the river. For according to Nichollet, lake Itaska is situate about 13 minutes north of the parallel of 47 degrees; and longitude about 95 degrees west; this lake is fed by five small creeks, which, he says, are the sources of the Mississippi. Owing to a bend in the river, the sources of some of its tributaries are probably more remote from the falls than lake Itaska; but it may be safely affirmed that, the distance from the falls of St. Anthony to the most remote source of the Mississippi, is less than three hundred miles. The author informs us that the Kansas is navigable twelve hundred miles. Now, by reference to Colton's late map it will be perceived that about one half this distance will reach the extreme source of this stream: and, unfortunately, no part of it affords navigation of much value. The Platte, he says, is navigable 1,600 miles. According to Fremont it is 900 miles, by land travel, from the mouth of the Platte to the South Pass, which is beyond the extreme source of this river. Col. Fremont made two attempts to descend the Platte, and finally abandoned it as impracticable. The following is the account of his last effort at the junction of the north and south branches, about 450 miles from its mouth. "At this place I had determined to make another attempt to descend the Platte by water, and accordingly spent two days in constructing a bull boat.— Men were sent out on the evening of our arrival, the necessary number of bulls killed, and their skins brought to the camp. Four of the best of them were strongly sewed together with buffalo sinew, and stretched over a basket frame of willow. The seams were then covered with ashes and tallow, and the boat left exposed to the sun for the greater part of one day, which was sufficient to dry and contract

the skin, and make the whole work solid and strong. It had a round bow, was eight feet long and five broad, and drew with four men, about four inches water. On the morning of the 15th we embarked in our hide boat—Mr. Preuss and myself, with two men. We dragged her over the sands for three or four miles, and then left her on a bar, and abandoned entirely all further attempts to navigate this river." We are further informed by the author of this article, that "the Missouri stretches 3,900 miles to the great falls, among the Flat Foot Indians, and 5,000 from New Orleans;" that "the Yellow Stone is navigable for 1,100 miles;" and "the Ohio is 2,000 miles to Pittsburgh."

We have not exposed the errors of this article for the purpose of calling in question the general correctness of the matter published in the excellent work from which we make the extract; but, for the purpose of vindicating the intelligence of the American people. The "Merchants' Magazine," as we are informed, has an extensive circulation in Great Britain, and probably on the continent of Europe.—What must foreigners think of the intelligence of a people whose leading journalists publish such absurdities in respect to the geography of the country, in which they live. And besides this, such works as the "Merchants' Magazine" will be sought for as a treasure, by the future historian: and how will the people of *this* country, in the next century, account for our ignorance of the geographical extent of the Valley of the Mississippi. The publication of such statements. in works so respectable as the "Merchants' Magazine," is calculated to destroy all confidence in every thing that is published respecting the resources or condition of this or other countries.

Governor Seabrook of South Carolina, it seems, has also made discoveries not less remarkable than those published in the Merchants' Magazine. In an essay on the "Agricultural and Physical Capacities of South Carolina," prepared at the request of the State Agricultural Society, a portion of which we find in De Bow's Commercial Review, Governor Seabrook says, "South Carolina includes 30,213 square miles, or 19,435,680 acres. Of this area, there is as little land in one body, the highest authorities assure us, unsusceptable of remunerating culture as the United States can furnish." The meaning of this sentence is not very obvious. We are not informed what is considered a remuneration for cultivating land in South Carolina: but we venture the opinion that, if a discovery has been made whereby the 6,000,000 acres of pine land in that State, can be made to yield a remuneration equal to a like quantity of the poorest land in Illinois, it is not less important to the human family than was the discovery of this continent; and the author is entitled to as much gratitude from mankind, and to as high a nitch in the temple of fame as Columbus. For who can estimate the benefits that must be derived from a remunerating culture of the hitherto unproductive lands, not only of South Carolina, but of every part of the habitable globe?

In another place, the author says, "the pine lands embracing about 6,000,000 of acres, constitute the most neglected section of the State. While in some quarters, they are erroneously regarded as valuable for the abundance and quality of their timber, in others the belief is

equally unsound, that their productive capacity is limited to plants which flourish solely in a thin and feeble soil. That, in all its relations, it is a district of country of immeasurable value to our community, will hereafter be attempted to be shown." It would seem that the author could find nothing worthy of being compared to these pine lands, and consequently, uses the word "immeasurable," to denote their incalculable value. Unless the reader has travelled over the pine lands of South Carolina, he will be totally incapable of appreciating a discovery that has imparted to them such immense value.

As evidence that the discovery of the agricultural and physical capacities of South Carolina are very recent, we notice the following facts, which are found in the essay from which we have quoted. The author tells us that "the estimated number of acres in cultivation, in 1840, was 1,221,000; at present it does not exceed 2,000,000, or about one tenth of her arable land." And we learn from a table, published as a note to the essay, that the value of exports from the city of Charleston in the five years ending with the year 1827, was $1,01 /, 405 more than that of the exports in the five years ending with the year 1847. Now, doubtless, if these discoveries had been known during the last period of five years, there would have been a great increase in the value of the exports from Charleston; but it would seem that these extraordinary discoveries are so recent that the people of South Carolina have not had time to reap from them the vast benefits which they promise to afford. For, we learn from the table beforementioned, that the value of the exports from Charleston, in 1820, when the quantity of land in cultivation was 1,221,000 acres, was $8,-690,530; and, that the exports in 1847 was $7,873,038; showing a decrease of $817,492 in twenty-seven years, notwithstanding an increase of about sixty per cent. in the quantity of land in cultivation. From these facts we conclude that the discoveries made in South Carolina were much needed, to prevent a further decline in her exports, and to arrest the removal of her population to other States.

The remarks of the author in regard to the climate and location of the State of South Carolina, are just; and we freely admit that, in these respects, she is not surpassed, perhaps, by any State in the Union. South Carolina has, also, some excellent land, and much that is susceptible of improvement; but we strongly suspect that the authority upon which Governor Seabrook relies, is but little better than that which we have noticed in respect to the geography of the Valley of the Mississippi.

South Carolina has been settled more than a century and a half—she possesses many eminent advantages, and yet, we are informed that only about one-tenth part of her arable land is in cultivation; the value of her exports have declined;* and we learn from the census of 1840, that her population increased but little more than two per cent. in the ten years preceding that date. This, according to our calculation, is to be regarded as a loss of about thirty per cent.—the increase of population in the United States being about thirty-three per cent. in the same

*We have seen a statement which we believe shows an increase in the value of exports from Charleston, for the year 1848—but we are unable to state the amount as we have mislaid the article.

period. Now, if any one can discover the true cause of this decline, in the population and commerce of South Carolina, and point out a remedy which he can induce her citizens to adopt, his name will deserve a place among those who have been the greatest benefactors of the State.

Great discoveries have also been made in Alabama. We find an article in the August number of the Commercial Review, which appears to have been taken from the National Intelligencer, in which the writer informs us that, the facts which he is about to develop will, he thinks, astonish himself. Under the head of PRODUCTIONS, he commences with the following paragraph: "To regard alone the ascertained value and extent of the surplus products of Alabama, which we ship off, compared with those of other States, omitting an estimate of our own heavy consumption of corn, wheat, hogs, cattle, sheep, timber, cotton consumed in home manufactures, value of negroes raised, and horses and mules raised, which would amount to several millions—confining ourself to the surplus productions, I say we will, I think, do so with some astonishment as associated with it must be the effort to estimate the vastness of the capital employed to produce it." And true enough, the author has stated some facts, well calculated to astonish not only himself, but the reader also. We notice the following as specimens. In glancing at her wealth, and what Alabama has done to promote the National welfare, he says: "She has paid to Maryland, Delaware, Virginia, &c, enormous sums for the three hundred thousand negroes she owns." The people of Alabama will doubtless be astonished at this statement; for they will be much puzzled, we think, to understand in what way Alabama has paid Maryland, Delaware and Virginia, the value of the negroes that they themselves owned, and brought with them when they moved to the State; and the value of such as have been born upon the soil.

In another paragraph, he says, "the capital invested in foreign and domestic commerce, city and town property, houses, canals and railroads, manufactories, banking and insurance, iron and coal mining, timber trade, steamboats and shipping, with the increased value of land by clearing, fencing, &c., value of slaves, live stock, and money hoarded, is very large in the aggregate amount, an estimate of which I scarcely dare mention."

In his list of "such internal improvements as are already completed" he mentions the Muscle Shoals canal, 35 3-4 miles in length, and the Huntsville canal, 16 miles. Unfortunately these works have long been completed, in more than one sense of the term. Congress gave to the State of Alabama, certain lands for the purpose of constructing a canal around the Muscle Shoals: the proceeds of these lands, probably about $700,000, was expended upon the work; the expenditure of the money was *complete*; the end of the improvement was *complete*; and the abandonment of the use of the canal is *complete* also. The last official act of the canal commissioners, which we remember, was that of taking the iron fastenings, hinges, &c., from the locks; this was some eight or nine years ago, and since then the Muscle Shoals canal

has been *complete*, we believe, in all respects. The Huntsville. or more properly, the Indian Creek canal, was projected by one of the most intelligent and enterprising citizens of the State, and was so far completed as to be used for the transportation of produce for several years: but in those days the people of Alabama seemed to entertain the opinion that whatever they paid for transportation, or travel, on public works, was so much lost; and tolls on canals, and fare on railroads, were as odious in their estimation, as was black mail in former times to the Southeron Scots. A canal in such a country could not be kept long in operation; and we believe that this was also abandoned about the time that the Muscle Shoals canal was finally *completed.*

The people in the region of the Tennessee river however, would have little cause to regret the failure of the Muscle Shoals canal, if the authors account of the navigation of that river, were true. In a table showing the distance that the several rivers of the State are respectively navigable, he informs us that the Tennessee river is navigable for the largest class steamers for 1300 miles!! Surely he must have studied geography and navigation, in the same school with the writer for the Merchants' Magazine; for his estimate of the length and capacity of rivers appear to be based upon the same principles.

Here is a speciman of the descriptive powers of the Author. 'From Tuscaloosa, on the Warrior, in the direction of Selma, on the Alabama, are bituminous coal-fields and iron ore, with marble and hard and soft lime stone in rich and inexhaustible profusion, immediately on navigable streams. The lands are covered with splendid forests of white oak, cypress, pine, cedar, mulberry, hickory, &c. Water power is unlimited and neverfailing.'

That each of these mineral and vegetable productions are found in Alabama is true, but a stranger to the State, who reads this paragraph, will naturally suppose that they all abound every where, mingled together in the utmost profusion. But we will venture to affirm that no one who shall ever travel through Alabama will be able to recognise the country from this description. Water power is abundant in some particular districts, but it is nowhere found without *limit.* And it is a peculiar characteristic of the streams in many parts of the state that, they are subject to fail in the summer and fall seasons. The writer of this article has crossed the Black Warrior river at the falls, near the city of Tuscaloosa, dry shod, with no other contrivance than a fence rail, or a short pole thrown across the principal stream, that flowed between the rocks. And in some of the best neighborhoods of the state he has known stock water and even drinking water fail.

The author concludes his article by giving a flattering account of the spirit of improvement which prevails in Alabama. Hear what he says upon this subject. "In conclusion, I feel the utmost pleasure in announcing to the friends of progress every where that, amongst many of those who have violently opposed all measures for encouragement of enterprise and the increase of facilities for the development of our resources more actively and profitably, practical experience has exposed to them their errors, and now, in the most cordial manner, the

most distinguished as well as many of the masses of their portion of the people, are uniting with the other portion in the most liberal and enlightened disposition to meet the calls of the whole people for the purposes alluded to."

We rejoice sincerely to learn that the people of Alabama are begining to entertain more enlightened views in respect to the true principles of political economy; and hope that the author is better informed in regard to the state of the public mind, than he appears to have been in respect to the geography and natural resources of the country.

It seems that an interesting discovery has recently been made in respect to the amount of money invested in internal improvements, manufactures and mining by the state of Missouri.

We find it stated in a Southern paper that, "at the late fair of the American Institue, in New York, some highly interesting details were given of the state of public improvement, and manufactures in the Southern states, "from which (says the intelligent editor) we gather the following facts." And in his statement of the amount invested in internal improvements and manufactures, in the respective states of the South, we find the following interesting information, "Missouri, it is estimated has invested in internal improvements, mines and manufactures $85,000,000!!!"

And this statement it seems was made on " authority." And we suppose that the *American Institute*, composed of wise men of New York, has considered this grave hoax as worthy of being published with its transactions, for the benefit of science, and of the future historian. The following is a list of the works of internal improvement, in Missouri, so far as they have come to our knowledge, viz: five McAdamized roads, commencing at the city of St. Louis, neither of which, we believe, are in use more than about five miles from the city limits; a rail road now in progress of construction from Independence to the Missouri river, a distance of about three miles; and certain improvements made on the Osage river which have cost about $18,570. These constitute the extent of our public improvements (common roads and bridges excepted) so far as we are informed.—Manafacturing and mining are probably each slightly in advance of internal improvement in Missouri; but we have no means of ascertaining the amount invested in either, we think however, that we might venture to affirm that $2,000,000 would cover the amount invested in both these pursuits.

How such articles, as these we have noticed, find a place in publications so respectable as the Merchants' Magazine, the Commercial Review, and the National Intelligencer, is to us unaccountable.

It is not presumable that the able conductors of either of these journals would publish anonnymous articles without examining their merits; but whether such articles be subjected to examination or not the world has a right to consider them as adopted and endorsed, by the publisher: he receives pay from his patrons, and is justly chargeable with the folly that such articles contain, or the mischief which they may produce.

The habit of magnifying, and manufacturing facts, which seems to be gaining ground in the United States, is calculated to corrupt the moral sense—the divine test of truth—and subject the judgement to the influence of self interest and passion. A false, or imperfect state of facts being assumed as the basis of reasoning, the conclusions which follow must necessarily be erroneous, and lead the individual from the paths of virture and wisdom. Party spirit and the licenciousness of political newspapers have done much to vitiate the morals, and even the language of the age. So far from seeking for truth, the political partizan conceals or denies such facts as tend to expose the unsoundness of his doctrines; while he magnifies every circumstance calculated to sustain them. This vice, though in some degree modified is diffused throughout the community. As a mode of expression, the positive degree seems likely to become obsolete: a thing simply good or bad is considered unworthy of the notice of the essayist, or public speaker; their wares must all possess qualities which can only be denoted by the superlative degree, and frequently, this, falls far below their conceptions of merit: and consequently they feel the necessity of calling to their assistance such terms as *the immeasurable, the unparalleled, and the infinite.* This licencious mode of expression prevails in familiar conversation; and even in polite circles scarcely anything is spoken of, which does not possess qualities superior to every degree of comparison.

ART. II.—THE MOSQUITO QUESTION.

As this is a question which at present threatens to interrupt the amicable relations existing between the United States and Great Britain, we shall undertake to give a general examination to it, in all its historical facts and commercial bearings. If we succeed in this, we, perhaps, can predict with certainty to what future events, if any, this mooted question will give birth. We may, perhaps, in advance, premise that we are none of those who have serious apprehensions that the peace of the world will be disturbed by two nations, the most commercial, enlightened, and powerful of the earth, going to war about the inhospitable and insalubrious Mosquito shore, which is entirely unfit for the residence of the white man, and now only roamed over by a few thousand of lawless negroes, zamboes and savages. All that is necessary to bring this vexed question to a happy issue, is, that our own government exercise firmness with prudence; and neither give nor take unnecessary offence.

The British pretension to the Mosquito shore, has its origin in events that took place nearly two hundred years ago, and not in the crowning of a half negro savage by the commissary of the Bishop of Jamaica, on the 7th of May, 1845, in St. John's Church, Belize, as King of the Mosquitoes, as is the generally received opinion. Oliver Cromwell, while Protector of the Commonwealth of England, sent out an expedition in 1656, against the Spanish West Indies. This expedition conquered Jamaica in the same year, which gave the English the first foothold in the West Indies, and which formed a basis for their future operations. Some three years subsequent to the conquest of Jamaica, some Englishmen landed on the peninsula of Yucatan, for the purpose of cutting and carrying away logwood; and afterwards the Mosquito shore, and the shores of the Bay of Honduras were visited for similar purposes. As the climate of the entire shore is very unhealthy, the Spaniards had not established themselves upon the coast, but had contented themselves with the conquest and settlement of the rich, populous and healthy districts in the interior on the table lands. The then recent conquests of the Spaniards, and the horrid atrocities attending it, were yet fresh in the memories of the savages. Even those in the recesses of the forest, and along the coast, whom poverty and an inhospitable climate had shielded from the cupidity and rapacity of the invader, having heard of the fate of their brethren, in the rich and populous districts of the interior, and dreading a similar fate, hated the very name of Spaniard, and were ready to welcome any stranger who would, or promised to, protect them against the cruel Spaniards. England and Spain then being at war, the natives of the coast invited the English to the shores, and swore eternal hostility to the Spanish, and everlasting friendship to the English. Establishments were made by the English under these circumstances, on the Bay of Campeachy, Honduras, and the Mosquito shore. Soon after the death of Cromwell, the Mosquito King placed himself under the protection of Charles the Second, through the British Governor of Jamaica, and stipulated in case of war between England and Spain, to act as an ally of the former, declaring at the same time, implacable hatred and revenge against the whole Spanish race.

The first British settlements were made near Cape Catoche, in Yucatan, and Laguna de Terminos, in Campeachy. In 1670, in a treaty with Spain, the privilege of cutting and carrying away logwood is secured to the English. But the Spaniards, ascertaining that under these stipulations the English were making permanent settlements in the country and erecting fortifications, captured in 1672 all the English ships found carrying logwood, and in 1680 expelled by a Spanish force sent there for the purpose, the English from Laguna de Terminos. England looked upon these proceedings of the Spanish, as a gross violation of treaty stipulations; but the Spaniards were prompted to it by the character of the settlements made by the English, and by the report of Sir Thomas Lynch, Governor of Jamaica, transmitted to King Charles II., in 1671, in which he states, "That the English had done every act that constituted the right of possession in the first settlers, with full rights of sovereignty, in all places held:" But still more by a proclamation, vindicating the right of the English to

the country, and giving regulations for the security of the settlements, issued in 1672, by Sir Thomas Modyford, successor of Sir Thomas Lynch; for which proclamation he received the approbation of the Lords of the Privy Council.

It seems from the report of the Governor of Jamaica in 1671 that the trade in mahogany and logwood from the settlements made on the Spanish American continent, was "so important, and annually increased His Majesty's customs, and the national commerce, more than any other of His Majesty's colonies." This commerce had sprung up since the passage of statutes 13 and 14 Charles II. which repealed the statute of Elizabeth, passed nearly one hundred years before, prohibiting the importation and use of logwood. The various colors produced by dying with it, when first used, proving very fugacious, the statute of Elizabeth was passed to prohibit its importation and use. The dyers of England pretending at the accession of Charles II. to have discovered the art of fixing the colors made of logwood, procured the repeal of the prohibition. The demand for the dye-wood, created by the repeal, led the British to endeavor to get possession of the countries producing it, and has ever since made them so tenacious of maintaining the foothold they acquired for the purpose. Ostensibly they acquired a mere temporary privilege, carefully stipulated for by treaty, but with them it was a predetermination to swell that privilege to an ultimate sovereignty over the territory; in which, as we shall see, they were often baulked; sometimes they even abandoned their pretensions, but only to re-assert them at a more favorable opportunity.

The expulsion of the English from Campeachy by the Spanish in 1680 was not followed by any definite result. As far as we are advised, Charles II. having surrendered himself to debauchery, and freeing himself from the cares of Government, in which he took no interest, except it might be in intrigues with Louis XIV. of France; the civil troubles in the latter part of his reign; the accession of James II; the Revolution of 1688; and the events that placed the Prince of Orange on the throne, all seem to have prevented the British king and people from taking any notice of the logwood and mahogany question, and retaliating the alleged insult of the Spanish, in capturing their vessels freighted with logwood, and driving the English from Campeachy. At least we have not been able to find any acts, that look like retaliation. The claim of the English to the right of sovereignty over the coasts visited for the purpose of procuring mahogany and logwood is asserted in the diplomatic correspondence, and placed, for the first time "upon the original consent of the independent and primitive occupants" whom they allege the Spanish had never subdued, and over whom they had never exercised any authority. This pretension the Spanish Government always resisted, and with what success will appear hereafter. In 1717 the Spanish Minister, the Marquis de Monteleone, protested against the English settlements at La Isla de Triste, Laguna de Terminos, and Campeachy, declairing "that if in the course of eight months, they do not leave the said places they shall be treated as pirates." As nothing decisive occurred, between the parties until the treaty of London, concluded on the 14th of July, 1786, we will omit the history of the intervening

time, except so much as relates to the history of the Mosquito country.

We have already stated the action of the person who claimed to be the Mosquito King, who, through the Governor of Jamaica, placed the country under the protection of Charles II. The exact year is not known, but it must have been between 1663 and 1667. No regular English settlement was formed until about the year 1749. From 1730 to 1738 the coast was occasionally visited by ships from Belize and Jamaica, to trade in logwood, mahogany and turtle shell. About the latter year the Spanish captured some British ships trading on this coast, which caused the war of 1739 which continued to the peace of 1748. Prior to 1730 we have no accounts except that the Mosquito shore was the refuge of the English and Scotch buccaneers. Blewfields, one of these pirates has given his name to one of the principal rivers of the coast. Here the buccaneers retreated from the gulfs and seas of the north and east, and from the Pacific on the west. Here they fitted out their expeditions and enlisted the mongrel people of the shore to engage in their enterprises. In 1749 Captain Robert Hodgson proceeded with one hundred men, drafted from the troops at Jamaica and took possession of Black river, on the Mosquito coast, erected a fort, mounted it with cannon, hoisted the British flag, and permanently established a garrison. The Governor of Jamaica, also appointed Justices of the Peace, "with authority to decide upon commercial questions, of contracts and of debts." In 1756 war was renewed between England and Spain. In the treaty of peace concluded between the two powers at Paris, in 1763, in the 17th article it was stipulated as follows:

"His Britannic Majesty shall cause to be *demolished all the fortifi-*
"*cations* which his subjects shall have erected in the *Bay of Hondu-*
"*ras*, and *other places of the territory of Spain* in that part of the world,
"four months after the ratification of the present treaty: And His
"Catholic Majesty shall not permit His Britannic Majesty's subjects,
"or their workmen, to be disturbed or molested under any pretence
"whatsoever, in said places in their occupation of cutting, loading and
"carrying away logwood; and for this purpose they may build with-
"out hindrance, and occupy without interruption, the houses and
"magazines necessary for them, for their families and their effects.
"And His Catholic Majesty assures to them, by this article, the full
"enjoyment of those advantages and powers on the Spanish coasts
"and territories, as above stipulated, immediately after the ratifica-
"tion of the present treaty."

So plain and explicit were the provisions of this treaty, that the British Government at first saw no subterfuge by which to evade carrying out its provisions. Hence in the following year, to wit: 1764, it gave orders for demolishing the fort at Black river, and withdrawing the garrison to Jamaica. Otway the British superintendent refused or neglected to obey this order; his conduct was approved, and the British denied, that the stipulations of the 17th article of the treaty of 1763, had any application to the Mosquito shore.

It seems the failure to perform the stipulations, above referred to, was entirely owing to the representations of the persons attached to the establishment on the Mosquito coast. The negotiations just concluded had alarmed them, and hence they would avail themselves of any subterfuge that would delay the execution of the provisions of the treaty, and give them time to fortify themselves in England and on the coast. The British Government admitted their subterfuge, and commenced discussing with Spain the question as to the extent of the application of said article in the treaty. In the meanwhile the settlers were not idle. They began to purchase lands from the Indians, and began to plant sugar canes, and cultivate cotton, cocoa and other articles. "Eight of the principal settlers purchased a tract of land said to contain a gold mine, lying on the banks of the Polloy river, and extending in length about seventy miles, and thirty miles in breadth on each side of it, known by the name of *Alberapoyer*."* Their object in buying this tract, and representing that it contained gold, was to associate with them capitalists in England, and through the latter to acquire influence over the actions of the government. Col. Lawrie was sent to England for this purpose, and in case he succeeded, to procure the establishment of a colonial government. He was graciously received by Lord Hillsborough, then His Majesty's Secretary of State, who approved his plan and assured him protection.

The assurances of Lord Hillsborough, in 1772, enabled him to accomplish his object. The new proprietors obliging the original proprietors to obtain a renewal and confirmation of their first grant in legal form, by lease and re-lease, and to enter the deeds in the records of the settlement of Black river.

The Spanish, in the mean time, failing to obtain the execution of the provisions of the treaty of Paris, began to annoy the settlers by sea and land, but, except keeping them in a constant state of alarm, did them but little real injury.

In January, 1773, George and Isaac, sons of the Mosquito King, and several chiefs, arrived in London. Among other things the object of their visit was to obtain a correction of the crime often practiced by English ships, of carrying away natives and selling them in North America for slaves.

During their visit in England, Lord Dartmouth gave a new system of administration for the settlement, which fell but little short of a colonial government. In January, 1776, young George, his brother and the other chiefs, took passage on board the *Morning Star*, Capt. Miller, bound from London to the Mosquito shore. The Spanish government, apprised of the visit of these chiefs, their objects, and the success of their mission, had fitted out two *guardas costas*, (literally *coast guards*, that is, revenue cutters) to intercept this vessel. She accidentaly touched at Cape Gracias a Dios, where she landed George and his companions, and then proceeded to Black river, her place of destination; here the two cruisers fell in with and captured her. When Colonel Lawrie arrived, who about this time was appointed Superintendant of the settlement, he found it much distressed and dispirited by the cap-

*McGregor's Progress of America Vol. 1 p 744.

ture of the Morning Star, and the desertion of their slaves through Spanish instigation.

The navigation of the coast had now become extremely insecure.—During that and the following year, 1777, two Spanish guardas costas seized a Jamaica vessel at Pearl Quay Lagoon, made prize of another belonging to Capt. John Campbell, at Blewfields, burnt there a third on the stocks, landed on the Corn Islands, carried away a large quantity of goods. Property on shore was not more secure. In July and August, 1776, a large body of negroes deserted, and a general disaffection appeared among those who remained. Martial law was declared and an almost entire suspension of business took place. In addition to this, the settlers on the coast were kept in a constant state of alarm, by rumors from time to time of the fitting out of a Spanish armament against the coast.

A correspondence was detected, and sent to London, between the Spanish Governor of Panama, an English trader, and an Indian chief, concerting measures to attack the settlement. Rumors were also afloat of the Spanish erecting fortifications at the mouth of the Rio San Juan. Under the alarm and excitement produced by these events and reports, the Superintendent asked the British government for a block-house, arms, ammunition, and a few pieces of artillery.—Lord George Germaine, then Secretary of State, sent, through the Governor of Jamaica, a severe rebuke of the Superintendent, for having made the request, "as being in direct contradiction to the 17th Art. of the treaty of Paris." This conduct of Lord Germaine, has since been much censured by British writers, and the conduct of the Superintendant, (which never was questioned) defended.

In 1779, a daring Englishman, named Tery, then in the pay of Spain, landed, in a Spanish vessel, on the southern part of the coast, and attempted, by presents, to win over the chiefs occupying the southern parts of the coast, to the interests of Spain, and to induce them to depose George the King and place his cousin Eugene in his stead, under the protection of Spain, and drive the English settlers out of the country. No important result grew out of this attempt,

In the spring of 1780, the Governor of Jamaica ordered an attack to be made on the Spaniards on Lake Nicaragua, with orders that the Superintendent and settlers on the Mosquito coast should form part of the expedition.

While the great body of the settlers and the Superintendent were absent in the interior, on the abortive expedition against Nicaragua, a body of Spaniards from Truxillo, (pronounced Tru-heel-yo) in Honduras, attacked the defenceless settlement, put the settlers to flight, destroyed the sugar and provision plantations and then returned to Truxillo. The negroes, left to themselves, seized upon what property was left and declared themselves free. Subsequently, this revolt was suppressed by Maj. Hoare, and Capts. Farrell and O'Brian, who had been expelled from Yucatan, and then resided on Roattan Island. By granting some of the ring-leaders freedom the rest submitted.

In March 1782 there were but twenty one regular English soldiers left at Black river bank. On the 5th of that month, the Spanish invested it by sea, by three schooners, two sloops, two gallies, and pet-

tyaugers. On the 15th, Spanish forces consisting of 1350 foot, 100 horse, and 300 Indians advanced from the south, by Black river: on the 29th, 1000 more advanced from the west, on the following day: a Spanish line-of-battle ship and a frigate came to anchor off Fort Dalling, and under a heavy fire from the Fort, landed 500 men. To oppose these forces the English superintendant had only 21 regular soldiers, the settlers, their negroes, and some hundreds of Indians, all badly supplied with arms, without ammunition, and without provisions. On the 30th he spiked the guns of Fort Dalling, and effected a retreat to the town of Black river bank, Captain Douglass of the militia who commanded the town, was captured by the Spaniards. On the 31st, a council of war was held, in pursuance of which a retreat was made, which was finally effected, attended with great distress from want of food, clothing, and from sickness, to Cape Gracias a Dios, (pronounced Grath'-yas ah De-ose'.)

In the month of August, Admiral Rodney then commanding the British fleet in the West Indies, despatched from Jamaica a small squadron with troops, arms, stores, provisions, and presents for the Indians, to the assistance of the fugitives at Cape Gracias a Dios; where the superintendant was found together with the settlers, Indians and negroes, numbering in all 800. On the 26th af August the expedition set out, and on the 28th, were joined at Plantain River by some freemen and negroes; and also by Capt. J. Campbell, who with 150 negroe volunteers had attacked and taken fort Dalling from the Spaniards. On the 29th, the whole body amounting to 1000 men advanced to the Bluff at the mouth of Black river, and on the 30th encamped opposite the town. The Spaniards opened a conference with Colonel Despard, which ended in a capitulation on the 31st—of the town, and 715 men and officers as prisoners of war. During the interval from the surrender of the town, to the treaty of 1783, no event of any importance took place on the coast.

On the 3d of September 1783, a definitive treaty of peace was signed at Versailles, between the English, and Spanish Plenipotentiaries; the sixth article of said treaty is as follows:

"The intention of the two High Contracting parties being to prevent, as much as possible all the causes of complaint, and misunderstanding heretofore occasioned by the cutting of wood for dyeing, or logwood; and several English settlements having been formed and extended, under that pretence, upon the Spanish Continent, it is expressly agreed, that His Britannic Majesty's subjects shall have the right of cutting, loading and carrying away logwood, in the district lying between the river Wallis or Balize, and Rio Hondo, taking the course of said two rivers for unalterable boundaries, so as that the navigation of them be common to both nations, to wit, by the river Wallis or Balize, from the sea, ascending as far as opposite to a lake or inlet which runs into the land and forms an Isthmus, or neck; with another similar inlet, which comes from the side of Rio Nuevo, or New River, so that the line of separation shall pass straight across the said Isthmus, and meet another lake formed by the water of Rio Nuevo or New River, at its current. The said line shall continue with the course of Rio Nuevo, descending as far as opposite to a river,

the source of which is marked on the map, between Rio Nuevo and Rio Hondo, and which empties itself into Rio Hondo; which river shall also serve as a common boundary as far as its junction with Rio Hondo, and thence descending by Rio Hondo to the sea, as the whole is marked on the map which the plenipotentiaries of the two crowns have thought proper to make use of, for ascertaining the points agreed upon, to the end that a good correspondence may reign between the two nations, and that the English workmen cutters and laborers, may not truspass from an uncertainty of the boundaries. The respective commissaries shall fix upon convenient places, in the territory above marked out, in order that his Britannia Majesty's subjects, employed in the felling of logwood, may, without interruption, build therein houses and magazines, necessary for themselves, their families, and their effects; and His Catholic Majesty assures to them the enjoyment of all that is expressed in the present article; provided that these stipulations *shall not be considered as derogating in any wise from his rights of sovereignty.* Therefore *all the English who may be dispersed in any other parts, whether on the Spanish Continent* or in any of the islands whatsoever, dependent on the aforesaid Spanish Continent, and *for whatsoever reason it might be, without exception shall retire within the district which has been above described*, in the space of eighteen months, to be computed from the exchange of the ratifications; and for this purpose orders shall be issued on the part of His Britannic Majesty; and on that of His Catholic Majesty, his governors shall be ordered to grant to the English, dispersed, every convenience possible for their removing, to the settlement agreed upon by the present article, or for their retiring wherever they shall think proper. It is likewise stipulated, *that if any fortifications should actually have been heretofore erected within the limits marked out*, His Britannic Majesty shall cause them all to be demolished, and he will order his subjects not to build any new ones. The English inhabitants, who shall settle there for the cutting of logwood, shall be permitted to enjoy a free fishery for their subsistence, on the coast of the district above agreed on, or of the islands situated opposite thereto, without being in anywise disturbed on that account; provided they do not establish themselves in any manner on the said islands."

These stipulations are so explicit, that it is a wonder that English diplomacy, crafty and unscrupulous as it ever has been, dared to controvert their meaning, and avoid their performance. Belize, as it is now known, is here agreed upon by the two powers to be the only place on the Spanish continent where the English were to be permitted the right "to cut, load and carry away logwood." But, it is also stipulated that this was only to be considered a temporary privilege, and everything done under it, "shall not be considered as derogating in anywise from the rights of sovereignty" of the Spanish King, over the district (Belize) so set apart. Moreover, all the English dispersed in any other parts of the Spanish continent, for any reason whatsoever, without any exception, were to retire within the described district within eighteen months after the exchange of ratifications. No fortifications were to be erected, and the King of England was to issue an order for the demolition of those already in existence in the Belize.

The English were bound, by treaty, to acknowledge the sovereignty of the Spanish monarch, over the whole Spanish continent, including the Belize, and to do no act derogating from it, not even erect buildings that looked to a permanency of their establishment there. Yet strange as it may seem, England evaded the performance of her engagement by delaying the execution of the stipulations, after the exchange of the ratification of the treaty, in raising and discussing the question what was meant by the words "Spanish continent." The British denying that the Mosquito country was a part of the Spanish continent.

The English and Spanish commissioners appointed under the treaty of Versailles met in 1785 and discussed the respective claims of England and Spain to the Mosquito coast, until the definitive treaty of London, July 12th, 1786. On the part of England it was contended that the Mosquito shore, was no part of the *Spanish* continent: but a part of the *American* continent, possessed by the Mosquito Indians, an independent nation, and was just as much independent of the crown of Spain, as other parts of America, possessed by independent states and powers. The Spanish however, seem to have had the best of the argument, as in the treaty of London, July 12th, 1786, it is stipulated as follows:

"I. His Britannic Majesty's subjects and the other colonists who have hitherto enjoyed the protection of England, shall evacuate the country of the Mosquitos, as well as the continent in general, and the islands adjacent, without exception, situated beyond the line hereinafter described as what ought to be the frontier of the extent of territory granted by His Catholic Majesty to the English, for the uses specified in the 3d article of the present convention, and in addition to the country already granted to them in virtue of the stipulations agreed upon by the commissaries of the two crowns, in 1783.

II. The Catholic King, to prove on his side, to the King of Great Britain, the sincerity of his sentiments of friendship towards his said Majesty and the British nation, will grant to the English more extensive limits than those specified in the last treaty of peace, and the said limits of the lands added by the present convention shall for the future be understood in the manner following:

The English line, beginning from the sea, shall take the centre of the river Sibun, or Jabon, and continue up to the source of said river: from thence it shall cross in a straight line the intermediate land, till it intersects the river Wallis; and by the centre of the same river, the said line shall descend to the point where it will meet the line already settled, and marked out by the commissaries of the two crowns, in 1783; which limits, following the continuation of the said line, shall be observed as formerly stipulated by the definitive treaty.

III. Although no other advantages have hitherto been in question, except that of cutting wood for dyeing, yet His Catholic Majesty, as a greater proof of his disposition to oblige the King of Great Britain, will grant to the English the liberty of cutting all other wood, without even excepting mahogany, as well as gathering all the fruits, or produce of the earth, purely natural and uncultivated, which may, besides being carried away in their natural state, become an object of

utility or of commerce, whether for food or for manufactures ; but it is expressly agreed that this stipulation is never to be used as a pretext for establishing in that country any plantation of sugar, coffee, cocoa, or other like articles ; or any fabric or manufacture, by means of mills or other machines whatsoever (this restriction, however, does not regard the use of saw mills, for cutting or otherwise preparing the wood) since all the lands in question being indisputably acknowledged to belong of right to the crown of Spain, no settlements of that kind, or the population that would follow, could be allowed. The English shall be permitted to transport and convey all such wood and other produce of the place, in its natural and uncultivated state, down the rivers to the sea, but without ever going beyond the limits which are prescribed to them by the stipulations above granted, and without thereby taking an opportunity of ascending the said rivers beyond their bounds, into the countries belonging to Spain.

IV. The English shall be permitted to occupy the small island known by the names of Casina, St. George's Key, or Cayo Casina, in consideration of the circumstance of that part of the coasts opposite to the said island being looked upon as subject to dangerous disorders; but this permission is only to be made use of for purposes of real utility: and as great abuses, no less contrary to the intentions of the British Government, than to the essential interest of Spain, might arise from this permission, it is here stipulated, as an indispensable condition, that no fortification, or work of defence whatever, shall at any time be erected there nor any body of troops posted, nor any piece of artillery kept there; and in order to verify with good faith the accomplishment of this condition, *sine qua non* (which might be infringed by individuals without the knowledge of the British government) a Spanish officer or commissary accompanind by an English commissary or officer, duly authorized, shall be admitted, twice a year to examine into the real situation of things.

V. The English nation shall enjoy the liberty of refitting their merchant ships in the southern triangle, included between the point of Cayo Casina, and the cluster of small islands which are situated opposite that part of the coast occupied by the cutters, at the distance of eight leagues from the river Wallis, seven from Cayo Casina, and three from the river Sibun, a place which has always been found well adapted to that purpose. For which end the edifices and storehouses, absolutely necessary for that service, shall be allowed to be built ; but in this concession is also included the express condition of not erecting fortifications there at any time, or stationing troops, or constructing any military works ; and in like manner it shall not be permitted to station any ships of war there, or to construct an arsenal, or other buildings, the object of which might be the formation of a naval establishment.

VI. It is also stipulated, that the English may freely and peaceably catch fish on the coast of the country assigned to them by the last treaty of peace, as also of that which is added to them by the present convention; but without going beyond their boundaries, and confining themselves within the distance specified in the preceeding article.

VII. All the restrictions specified in the last treaty of 1783, for

the preservation of the right of the Spanish sovereignty over the country, in which is granted to the English only the privilege of making use of the wood of the different kinds, the fruits and other produce in their natural state, are hereby confirmed; and the same restrictions shall also be observed with respect to the new grant. In consequence, the inhabitants of those countries shall employ themselves simply in the cutting and transporting of the said wood and in the gathering and transporting of the fruits, without meditating any more extensive settlements, or the formation of any system of government, either military or civil, further than such regulation as their Britannic and Catholic Majesties may hereafter judge proper to establish, for the maintainance of peace and good order, amongst their respective subjects.

VIII. As it is generally allowed that the woods and forests are preserved, and even multiply by regular and methodical cuttings, the British shall observe this maxim, as far as possible; but if, notwithstanding all their precautions, it shall happen in the course of time that they were in want of dyeingwood, or mahogany, with which the Spanish possessions might be provided, the Spanish government shall make no difficulty to furnish a supply to the English at a fair and reasonable price.

IX. Every possible precaution shall be observed to prevent smuggling; and the English shall take care to conform to the regulations, which the Spanish government shall think proper to establish amongst their own subjects, in all communications which they may have with the latter; on condition, nevertheless, that the English shall be left in the peaceable enjoyment of the several advantages inserted in their favor in the last treaty, or stipulated by the present convention.

X. Their Britannic and Catholic Majesties, in order to remove every kind of doubt with regard to the true construction of the present convention, think it necessary to declare that the conditions of the said convention ought to be observed according to their sincere intention, to insure and improve the harmony and good understanding which so happily subsist at present between their said Majesties. In this view His Britannic Majesty engages to give the most positive orders for the evacuation of the countries above mentioned, by all his subjects of whatever denomination; but if contrary to such declaration, there should still remain any person so daring as to presume, by retiring into the interior country, to endeavor to obstruct the evacuation already agreed upon, His Britannic Majesty, so far from affording them the least succor, or even protection; will disavow them in the most solemn manner, as he will equally do those who may hereafter attempt to settle upon the territory belonging to the Spanish dominion."

In pursuance to the provision of this treaty, positive orders were issued, by the British Government, for the evacuation of the Mosquito shore. The whole country was soon after abandoned, amid excessive hardship to the settlers, who had extensive possessions and fine plantations, and enjoyed most of the comforts of life in the new settlement.

It is said by British writers, that the value of the property lost to the British settler on the Mosquito shore, and other portions of the continent, was not short of £100,000 sterling, which had to be abar-

doned to fulfil the treaty stipulations of the treaties of 1783 and 1786. The sufferers drew up petitions to Parliament to adjust their claims for losses, but the ministers would not even allow the petitions to be received in Parliament.

The English government, for once, acted up to the meaning of the treaty, not only to the letter, but spirit. Yet, notwithstanding the positive orders of the government of Great Britain, for evacuating the country, a few Europeans chose to remain at Blewfields, and Pearl Lagoon, but in the words of the treaty, the English government, "so far from affording them any succor or protection, disavowed them in the most solemn manner," and we hear nothing of British pretensions until the crowning, in 1845, at Belize, already referred to, and taking the king and the Mosquito country, *precisely defined* by Lord Palmerston, under British protection.

We said that the British, from 1786, to 1845, set up no pretensions, and disavowed any to the Mosquito country.

The country abounding in turtle shell, mahogany, Santa Maria wood, rosewood, gums, dye-stuffs, drugs, sarsaparilla and other medicinal plants, has been visited by European and American ships for the purpose of obtaining by barter with the natives, these, its valuable productions. The English, however, have taken the lead in this barter, and during the last sixty years a great many abandoned characters have left the British ships and remained on the coast. These profligates have adopted the customs and manners of the natives, amongst others that of plurality of wives. But as they are not confined to any particular place, it is not uncommon for a British subject to have one or more wives, of native women, at different parts of the coast. The father of the present Mosquito king, Robert Charles Frederick, was a notorious drunkard and debauchee. Through the influence of their native wives, these British subjects obtained from the drunken king extensive grants, covering about two-thirds of the whole country, and conferring on the grantees little less than absolute sovereignty over the region comprised in them. These are signed Charles Frederick, his Mark—the mark being a scratch. In 1844, the British government disavowed these grants.

Perhaps the best idea that we can give of the manners and customs of the English, and reason for their influence over the natives, will be to copy an extract from Mr. Roberts' "Sketches of the Mosquito shore," who, in 1817, visited that country. Mr. Roberts being an Englishman, must be an unexceptionable witness: he says—

"The children here, (at Black river bank) and at Blewfields, are in "general baptised by the Captains of trading vessels from Jamaica, "who, on their annual return to the coast, performed this ceremony "with anything but reverence on all who have been born during their "absence; and many of them are indebted to these men for more than "baptism. In proof of this, I could enumerate more than a dozen of "acknowledged children of only two of these captains, who seem to "have adopted without scruple, the Indian idea of polygamy in its "fullest extent. By this licentious and immoral conduct they have, "however, so identified themselves with the natives, and with some

"of the principal people on the coast, as to obtain a sort of monopoly "in the sale of goods, which it would be difficult for any stranger, not "possessed of an intimate knowledge of the Indian character, to shake; "they have also so insinuated themselves into the good graces of the "leading men, that their arrival on the coast is hailed with joy by all "classes, as the season of festivity, revelry, christening, and licen-"tiousness."

The present difficulty between England and Nicaragua grows out of the crowning of the so called present King George Augustus Frederick, as King of the Mosquito country, and taking him and the country under the protection of Great Britain. This, and the fact that Lord Palmerston of his own will and without consultation with any adverse party, immediately defined and marked out the limits of the country so taken under British protection, brought forth a protest from the Nicaragua government. And as Lord Palmerston's boundary extends to, and embraces the most southern mouth of the Rio San Juan, involved the United States, since a number of our citizens had obtained from the Nicaragua government, the right of constructing a canal from the Atlantic, by way of the San Juan, Lakes Nicaragua and Leon or Managua, to the Pacific. A detailed account of the coronation, we now proceed to give, in connection with similar events in time past.

McGregor says, "On the 17th of April, the British sloop of war Hyacinth arrived at Blewfields, for the purpose of carrying the young king George Augustus Frederick, to Belize, to be crowned according to ancient usage, which was performed by the commissary of the Bishop of Jamaica on the 7th of May, 1845, in St. John's Church, Belize, in the presence of the Superintendent, Col. Faucourt, Mr. Walker, British agent at Blewfields and several chiefs." "The regalia consisting of a silver gilt crown, a sword and sceptre, all of moderate value, and formerly given by the British government, to one of the kings, which were brought from their usual place of security, the dwelling of the chief, at Vankes river." This chief is an old negroe named Jack, who has been a great favorite with the Mosquito kings, for the last forty years, and the first and most powerful of chiefs.

In the extract, the words "to be crowned according to the ancient usage," occur. These would lead the unwary reader to suppose, that such has been the custom, and that nothing new was connected with the crowning. Such however is not the fact. Before the execution of the stipulations of the treaties of 1783 and 1786, no such crowning is on record as taken place either at Belize or elsewhere. It is true that the Mosquito Kings called their sons after the kings of England, and one of the sons even was styled the "Duke of York;" yet the reason why they assumed British names, was entirely owing to the influence that the British traders had acquired over the natives. It is also true that Jeremy visited the governor of Jamaica, and executed a deed, placing himself under the protection and homage of Charles II. and then proceeded to England "and was graciously received" by that king. Edward, the successor of Jeremy, and his successors George I. and George II. all visited Jamaica, and went through the ceremony of

homage and claiming protection, and this brings down the history of these events to 1787, the year of the evacuation of the coast by the English, under the stipulations of the treaty of London. But no crowning either at Jamaica, Belize or elsewhere under British auspices is mentioned. King George III., who was the young Prince, already spoken off, as visiting England and returning in the Morning Star in the year 1776, is represented as being a half Negro and Indian, and of cruel, barbarous and vindictive character. He enslaved great numbers of the Blanco, Woolva and Cookra tribes; had a great number of wives and concubines, whom he often flogged so severly that some of them died in consequence. The murder of one of these women under circumstances of remarkable barbarity, created a riot, during which the king was killed by a shot fired at him by one of the natives. A British trader who happened to be on the coast, obtained possession of his two sons—George Frederick, and his half brother Robert, both then very young. The trader persuaded the chiefs to let him carry them away and let them be educated "English fashion." They were allowed to depart, and were landed on the Island of Jamaica, where they remained some time. During their absence the chiefs established three different governments, under as many chiefs, along the coast. Afterwards the British traders took George Frederick to Belize, where he was met by some of the Mosquito Chiefs, and crowned; invested with sword, rake and spurs; a royal salute was fired, and he was styled "King of the Mosquito shore and nation." Medals and dresses were presented to the chiefs, and they were sent to the Mosquito coast, in a British sloop of war. He was landed in that part of the country governed by General Robinson, a negro, and powerful chief, with whom he at once quarreled.

Mr. Roberts, who in 1817 visited this coast, describes, this King as having acquired but little useful information during his residence at Jamaica, that it amounted to little more than engrafting, as it were the bad qualities of the European and Creole, upon the vicious propensities of the Zambo, and the capricious disposition of the Indian. He had a turbulent reign and was assassinated in 1824. His half brother Robert succeeded him, who had a short reign. The next king was another George Frederick, who was succeeded by the late King Robert Charles Frederick, the debauchee and drunkard already spoken of. None of the last three kings were crowned at Belize, and therefore, "the ancient usage" has but one precedent, that of George Frederick, about 30 years prior to 1845, during which time there intervened three kings, with respect to whom the usage was not observed.

It is evident that the crowning of George Frederick, if it furnished a precedent, took place under entirely different circumstances, and different reasons, than the crowning of the present King. The first was an affair of private individuals, and performed for their private benefit; the latter was a national affair and done for the aggrandisement of British power in that part of the globe. The first was done to obtain a controlling influence over the country by having it over the person of the king, and securing a commercial monopoly on the coast to those who from first to last participated in the affair. Hence the carrying away the King, crowning him at Belize, and for fear that

their conduct might not be sanctioned on the coast, returning him in a sloop of war, thereby giving the impression that it was under and by authority of the British government that the proceedings were had, and consequently overawing opposition to it. But there is no acknowledgement of that act, by the British Government, neither did it under it, or any subsequent act, until 1845, claim the country as under British protection. But the crowning in 1845 was entirely different. It was entirely a government affair. English writers are very explicit about it. McGregor already quoted says: "On the 17th of April, (1845) the British sloop of war *Hyacinth* arrived at Blewfields *for the purpose of carrying the young King* George Augustus Frederick to Belize," &c. When the crowning was accomplished he was declared the King of the Mosquitos, presented with an ensign and standard for the Mosquito nation, sent from London, and Lord Palmerston, immediately defines the limits of the country so taken under British protection, including the most southern mouth of the Rio San Juan, which brought on a difficulty with Nicaragua. A British resident agent is appointed, "who offers to the king and chiefs counsel and advice, and maintains the alliance and protection of England."

Since the events of 1845, England has claimed the right of sovereignty over this shore, re-affirming the doctrine abandoned by the treaties of Versaillies and London, more than sixty years ago, that these people were an independent nation, the original occupants of the country which Spain never controlled or occupied. McGregor, the Secretary of the British Board of trade says:

"If we examine all the circumstances, bearing upon the claims of "right to possession and occupancy; and if we consider that Spain "has lost all dominion on the continent of America, we are reasonably "led to the conclusion that the Mosquito Territory is still an indepen-"dent country, and one over which Spain never had the least control "or occupation. It is evident that none of the anarchical states of "Central America have any right by occupation, or by recognition to "the Mosquito country. If we contend that the country is indepen-"dent, a question arises as to how far its king or rulers, and more "than all its inhabitants are under the protection or sovereignty of "England." Again:

"How far Yucatan can pretend to any right over Belize, or Central "America to the Mosquito shore, is a question for public jurists to "decide—we deny any such right; Spain has relinquished all sove-"reignty, and Great Britain is the only European power which has "ever occupied Belize and the Mosquito shore; that too not by con-"quest, but by the original consent of the primitive inhabitants. The "right to Belize by occupation and possession is, therefore, undoubt-"edly vested in the British crown."

It is true that Spain has relinquished all sovereignty, but not to Great Britain, therefore that relinquishment does not strengthen the British claim. All the rights of sovereignty that Spain originally possessed, (and which England acknowledged in the treaties quoted at length) has passed to the States in favor of which Spain made the relinquishment, and England stands in relation to them precisely, as she

stood in relation to Spain. This is both common sense, and common justice. As to the right of considering any of the aboriginal tribes as independent sovereignties, who have a right to dispose of the sovereignty and of the country they inhabit to any foreign state, it is too late to raise that question. The contrary doctrine (whether right or wrong it matters not,) has long been established by the law of nations and no power contributed more to its establishment than Great Britain It is an interpolation of what is now considered as established law, of the most dangerous nature, and if not resisted will lead to the most direful consequences. The United States have in western Texas, in New Mexico, California and on the shores of the Pacific and elsewhere, numbers of Indian tribes, over whom they exercise no authority, and whom the government has not yet been able to compel to acknowledge even its sovereignty. Yet if the doctrine advanced by England be admitted, Great Britain by forming treaties with these savages can acquire sovereignty over the territory they claim as their own. It would open an unlimited field for European encroachment upon the weak and imbecile Spanish aud Portugues States. New Grenada, Venezuela and La Plata, among the former have all extensive regions, inhabited by natives in their primitive state, who have never acknowledged any authority except that of their own chiefs. While in Brazil almost the entire area embraced in the Provinces of Guiana, Soliemoens, Matto Grosso, and Goyaz, embracing about two thirds of the Empire, is yet in its primitive condition and under the government of independent chiefs. There is no state on the American continent, British America not excepted, but that would be liable to have its territory violated, if the English doctrine advanced should be once considered as law.

But in point of fact the Mosquito Indians, as they are called, are not primitive occupants, but usurpers. They are not Indians but Zambos. Mr. Bryant Edwards says, that their negro ancestors come from the Zambo country in Africa, in a Dutch vessel, which was wrecked on the coast, and who by this means obtained their liberty. Being several hundred strong, they had many conflicts with the natives on the coast, who finally made friends with them, and allotted them wives and lands. From which have sprung the Mosquito Indians. The account of the Buccaneers differs only from that of Mr. Edwards in making the vessel Spanish instead of Dutch. Be that as it may, the original negro population has been constantly augmented by runaway slaves from the Spanish along the coast and in the interior, and from the English at Belize, Jamaica, Island St. Andre and other places along the shore, it has always been and is now a general refuge for runaway slaves, in that part of the world. To which may be added Zambo Caribs, and Caribs, banished by the Spanish from St. Vincent, and the other windward and leeward Islands.

The barbarities of the Mosquito men and Indians associated with them against the Cookras, Blancos, Woolvas, Toacas and other Indians, in capturing and selling them for slaves, to the settlers and traders, has caused these latter to withdraw into the interior, on the frontier of the Spanish settlements and claim their protection. The Mosquitos have been a scourge to the whole coast, and their cruelties

and barbarities have either driven away or exterminated the aboriginal tribes. England in protecting them, is, therefore, not protecting "original occupants" against the encroachments of the States of Central America, but is sustaining a lawless band of kidnappers and murderers. in their inhuman outrages on the "original occupants" in exterminating them, by either death, slavery, or exile. England inherited her influence over these people from the Buccaneers. and if she makes use of it to filch from a weak, inoffending State, a portion of its territory, becomes an apologist, and participant in their crimes and outrages.

In no light in which England has presented her own conduct in this affair, can we see a justification of her conduct, or even a plausible apology for it. The truth is, she cannot justify herself, at the bar of public opinion, in our enlightened age. But what of that? Might, with her, is right; and public opinion, social morals, and everything else that is dear and sacred, are contemned and trampled upon by her, if they stand in the way of her political and commercial aggrandisement. The Mosquito coast is necessary to her, to carry out a commercial scheme of monopoly, and she will have it, by fair means if she can, by foul if she must. From the weak States of Honduras, Nicaragua, and Costa Rica, who claim it, she has nothing to fear. If she chooses to rob them of a portion of their territory, there is no other remedy for them than to submit to it. Nicaragua saw this from the first, and to avert the threatened calamity has made the United States, indirectly, a party to her dispute. This she accomplished by granting a charter to American citizens, for the construction of a canal from the Atlantic, by way of the Rio San Juan, Lakes Nicaragua and Leon, to the Pacific. The British Consul informed the parties that the British government could not permit them to construct said canal, as it would be a violating the integrity of the Mosquito territory, the sovereignty of which, England was bound to protect. They appealed for protection to the American government, and the government very properly has decided to afford them that protection. Thus the matter stands at present.

The territory in question, was known to the Spanish geographers as Taguzgalpa, and Tolagalpa; Yare, or Cape River, as Rio Nueva Segovia; Black River, as Rio Tinto, (i. e Ink River.) Blewfields, as Rio Desaguadero. Cape River is sometimes also called Rio Vankes, and by the English, Wanks River. At Cape Gracias a Dios, the former residence of the Kings, are but three houses—namely, the King's, a chief's, and an older trader's: the rest are miserable huts. The soil in the neighborhood is very sterile, producing only a coarse kind of grass, a few patches of cassava, and no good water is to be found. For fifty or sixty miles interior, the land is low, sandy and sterile, with an occasional ridge of pine, beyond which it gradually improves, and in the vicinity of the mountains is said to be the richest on the continent, and the scenery the most romantic in Central America. The country beyond the low sandy district along the coast, is called the "Hill Country;" and the people inhabiting it, are called the Hill People. They are pure Indians, and submit to the exactions of both the Mosquitoes and Spanish; to the former they pay a small annual tribute to buy security, while they acknowledge the sovereignty

of the Spanish States, and carry on an extensive barter with them. They also furnish the Mosquitoes with the greater part of the bananas, plantains, and other fruits and vegetables used along the shore.—The shore abounds in fish of various kinds, and the inlets and lagoons are frequented during all seasons, by innumerable flocks of teal and widgeon.

But above all the coast, and especially the Mosquito Keys near cape Gracias a Dios, furnish an inexhaustible supply of the finest green turtle. A London confectionary in 1844 established at the Keys a manufactory for preserving green turtle. The rivers that flow through the country have an extreme sluggish current, not exceeding a mile an hour; through the low country, but through the hill country the current is from three to four miles, and, in their descent from the mountains, form innumerable water-falls. The Spanish settlements on the rivers commence from ninety to one hundred miles from the coast. The Spanish settlements were originally made by miners, as considerable quantities of gold and silver were formerly produced near the sources of these rivers. The mines are not very productive at present. The mountains and hill country are extremely fertile, and will produce three crops of Indian corn in a year, and is well adapted for pasturage. The climate is not subject to the extreme heat of the coast and is very healthy. The Spanish call these regions *tierras templadas*, or temperate lands, while the coast they call *tierras calientes* or hot lands. The hills gradually approach the coast, as the isthmus narrows, and at the mouth of the river St. John (Rio San Juan) approach within a few leagues. The *tierra calientess* therefore form a triangle whose base is the Gulf of Honduras on the north, and whose apex, is near Boca de Toro (Bulls mouth) south of the San Juan. The climate is unhealthy owing to the great heat, and stagnant pools, as a great portion is covered by water during the rainy season. It is also infested by innumerable swarms of mosquitos, sand flies and other poisonous insects and reptiles, which are an intolerable annoyance. Europeans generally cannot stand the climate, though there are cases where they have attained a good old age. It seems however peculiarly adapted to the negro race; all travellers agree, that the finest specimens of the African race are here to be met with, and malformations, so frequent in this race in temperate climates, are entirely unknown here. The low country, except along the shore, and banks of the rivers, is an extensive savannah, or prairie, covered with a coarse grass which grows luxuriantly, and which would afford excellent pasturage for black cattle. But the Zambos, are fisherman, and not herdsmen or agriculturists. Along the coast, and shores of the rivers there are dense forests of logwood, mahogany, locust, cedar, santa maria, rose wood and many other kinds of trees.

In 1845 the gross returns of British and foreign trade at Blewfields and Corn Island, were as follows:

NATIONS.	ARRIVED.				DEPARTED.			
	Vessels.	Tonage.	Crews.	Invoice.	Vessels.	Tonage.	Crews.	Invoice.
At Blewfields.	No.	tons.	no.	£	No.	tons.	no.	£
British.	15	206	71	2708	15	206	71	750
American.	2	173	12	1094	2	173	12	800
Columbian, *	7	108	3	1460	7	108	32	1260
TOTAL.	24	487	115	5262	24	487	115	2810
At Corn Island.								
American.	2	218	13	1200	2	218	13	1250
Columbian.	3	146	15	60	3	146	15	130
TOTAL.	5	364	28	1260	5	364	28	1380
GRAND TOTAL.	29	851	143	6522	29	851	143	4190

We have thus completed a historical and chorographical description of the country in dispute, and also its capacity for producing articles that enter into commerce. The latter is so limited and unimportant, that it is difficult to perceive why England should so tenaciously maintain her hold on it, as is shown in the history of the Coast. Or rather, that after abandoning her pretentions for sixty years, she should again so suddenly re-assert them in 1845. But all difficulties vanish when her secret policy for it is known, to attain which she will violate the most obvious principles of natural justice, and set at defiance the law of nations. One of the first principles of the law of nations, is the perfect equality and independence of each nation. It matters not how weak a nation may be; she has a right to manage all her internal policy as she pleases, and none of her more fortunate and powerful sisters, has a right to interfere with her in this respect, or dictate her internal administration; and no nation that respects, or observes the golden rule will be guilty of such impertinent interference. Prior to the recognition of the principle of natural justice, which is now denominated law of nations, such interference was common; and the powerful made use of it to gain dominion over the weak. Macedonia by its means dissolved the Achaean league and became mistress of Greece and the World. In latter times, the Romans took part in the internal disputes of every foreign nation, ostensibly for the purpose of protecting the weak against the oppression of the strong, but really for the aggrandisement of Roman power and dominion. The English are the Romans of modern times, as far as the lust of dominion is concerned; to acquire which, no opportunity escapes them. On the old continent they have fixed things pretty much to their own liking, but on the new, the United States are rising into a most formidable commercial and political rival, already spreading her arms so as to embrace both oceans. A communication under their control either by rail road through the heart of the continent, or by canal across the Isthmus, would give them the commercial supremacy on both oceans. England knows this, and will prevent it, if she can. Hence her seizure of the Mosquito coast, because through it, as she has defined it, passes the only practical route for a ship canal between the two oceans. This is the secret that prompts her strange conduct in assuming sovereignty

* One American under the Columbian Flag.

over that coast, the cause of the boldness with which she defends and justifies her acts, and the tenacity with which she maintains her foothold. This we shall make clear hereafter.

ART. III.—LIFE AND TIMES OF GEN'L GEORGE ROGERS CLARK.

PART SECOND—ON THE EXPEDITION TO ST. VINCENT—OR, VINCENNES.

(When we last separated, Clark was left in full preparation for an expedition from Kaskaskia to St. Vincent's.)* Clark's force, including the two French companies of volunteers raised in Kaskaskia, consisted of but 170 men, who, with those placed on board an armed galley sent up the Wabash river, made the whole of his effectives amount to 216 men. On the 7th February, 1779, this forlorn hope, commenced its march through an Indian wilderness of 160 miles at the present day, in a wet, though fortunately, not a cold season. This dreary and fatigueing route was alleviated by the politic management of Clark, in encouraging parties of hunting; and invitations from the companies successively to feast on game, accompanied by war dances, in the manner of the Indians. In this way, by a judicious mixture of manly condescension and discipline, the party, after incredible fatigues, on the 13th February, 1779, reached the Little Wabash. At this point, the forks of the stream, are three miles apart, and the opposite heights of land, five miles, in the ordinary stage of the water. But at the time of Clark's arrival, the interval was covered with water, "generally three feet deep, never under two, and frequently over four." I quote the words of Maj. Bowman's diary of the march. During the wearisome *wading* rather than *march*, a little drummer, floating along on his drum-head, afforded no little diversion to the troops: so much do trifles enter into the passing merriment of life in large bodies to beguile their fatigues. On the 18th, the expedition had reached so near to St. Vincent's, as to hear the morning and evening guns of the British fort; and in the evening of the same day, reached within nine miles of the town, below the mouth of the Embarras river, which discharges itself on the right bank of the Wabash, below St. Vincent.

Still the troops were separated from St. Vincent's by the flooded Wabash. Great difficulties were now experienced in obtaining canoes for crossing the river, and the men required all Clark's address and command to keep their spirits from failing. The armed galley

* Third of a course of Lectures on the History of the West.

despatched from Kaskaskia, had not yet appeared, and canoes could not be built in time to save the troops from starving; the over-flowed state of the country having put a stop to hunting for game. On the 20th, the water-guard brought to, a boat, from which the most cheering intelligence was obtained in regard to the disposition of the inhabitants of St. Vincent, and the continued ignorance of the American movement on the part of the enemy. There was yet a large sheet of water to be passed, which proved, on sounding, to be up to the arm-pits of the men. On the report being made to Clark, and his speaking seriously of it to an officer, the alarm spread through the detachment; and the men seemed ready to despair. Col. Clark, observing the depression on the faces of his men, whispered to one or two officers near him, to imitate him immediately, in what he was going to do; then taking a little gunpowder in the palm of his hand, and mixing it with some water, he blacked his face with it and raising the war-whoop, in Indian fashion marched into the water, copied and imitated by his men. They marched through the water with a cheerfulness, which many troops under their sufferings would not have shown upon land. So much does the conduct of troops depend upon the tone of their commanders. A favorite song was often sung, when the whole detachment would join in the chorus, and thus was whiled away the voyage rather than the march.

At length two canoes were procured to transport the detachment over the deepest water; still, after crossing the main channel of the Wabash, there yet remained another deep plain of water to be crossed; and what heightened the difficulty, there was no longer any timber to support the fatigued and famishing men in their wading. The object of all their toils was now in sight, and Clark, after a spirit-stirring address to his men, led the way through the water, still full middle deep. Sometimes the troops were cheered with a purposed deception, by the advanced guard, that the water was growing shallower; and as they approached nearer to the coast, land! land! the favorite cry of mariners was shouted out. When the men arrived at the woods, the water was still up to the shoulder; yet the support of the timber and floating logs, was found of most essential assistance to the weaker men. To such a degree of exhaustion had this march, through so much and such water, reduced the men, that, on approaching the bank, or rather the high ground, they would fall upon their faces leaving their bodies half in the water, so unable were they to continue their exertions. While the detachment was thus resting on a dry spot of timberland, tormented with hunger and weariness, an Indian canoe was fortunately captured. It contained a quarter of buffalo beef, some corn and tallow. This was a prize which starving men can alone appreciate. It was cooked into broth, refreshing the troops most acceptably, small as was the share that fell to each individual. In a short time afterwards a gunner who was shooting ducks near the town of St. Vincent, was taken prisoner and by him Clark sent to the inhabitants of the post, apprizing them that he would take possession of their town that very night, and giving notice to all who were friends to the British, to repair to the fort and fight like men; but if they did not, and should afterwards be found aiding the enemy, they were assur-

ed they would be severely punished. Seldom has frank notice of attack been given to an enemy by his antagonist and a choice afforded him to retire to his friends; it was resolved to do so, in this instance, with the expectation that its imposing character would lend confidence to the American friends and strike dismay into their enemies. So much did it operate in this way, that the expedition was believed to be from Kentucky, it was thought utterly impossible in the flooded condition of the waters, it could be from Illinois. This idea was confirmed by some messages from some of Clark's officers under the assumed name of persons known to be in Kentucky, to their acquaintances in St. Vincent; nor could the presence of Clark be credited, until his person was pointed out by one, who knew him. To mask the weakness of the party, the American soldiers were to frame their conversation before strangers, so as to lead them to believe there were at least a thousand men. One circumstance occasioned much surprise to Clark, it was, that although a great deal of bustle could be perceived in the streets of the town, "not a drum was heard not a gun was fired" from the British fort. In fact as was afterwards ascertained, the friends to the enemy were afraid to give him notice of Clark's presence. About sunset on the 22d Feb., sixteen days since leaving Kaskaskia, the American party set off from the camp to take possession of the town, marching and countermarching round some mounds in the prairie round the town, displaying several sets of colours which had been brought by the French volunteers, so as to enhance the appearance of their numbers.

Clark then marched his detachment through some ponds *only* breast high, and encamped back of the town on some heights. Still there was no hostile demonstration on the part of the British, and the utmost impatience was felt by the Americans, to unriddle the mystery. For this purpose, Lieutenant Bayly was sent with a detachment of fourteen men to commence an attack upon the fort. They did so. But the fire was still attributed to some drunken Indians by the garrison; who frequently *saluted* the fort, in this irregular manner; until a man was killed at a port-hole, when the fire began in good earnest on both sides. On this occurring it may amuse you to mention however below the strict dignity of history, that our countryman Helm, then a prisoner in the fort, was playing piquet with the British commander, so soon as he heard the bullets rattling about the fort, jumped up and swore those were Clark's men. The commander is said to have had a large bowl of apple-toddy upon the hearth, and *saw*, the mortar falling from the building into his toddy, when he said Clark would take them all prisoners; but the rascals had no business to spoil his toddy with their shooting. It is added Helm cautioned the British soldiers about looking out at the port-holes, for, said he, Clark's men will shoot your eyes out, and it happened that a man who was reconnoitering through a port-hole, was actually shot in the eye; nor was this any exploit *for the sharp shooters* of Kentucky.

The ammunition now began to fail, owing to Clark's relying on the stores in the *galley*, for further supply: when a fortunate disclosure of powder and ball which had been buried by the owners to conceal it from the British, was made by certain French gentlemen, to Colonel

Clark. The fire now continued without intermission, except for about fifteen minutes before day, until nine o'clock the next morning. Our men would lie within thirty yards of the fort, cooly waiting for the opening or even the darkening of a port hole, when a dozen rifles would instantly be discharged into the aperture, cutting down everything in their way. By this terribly concentrated fire, the garrison became discouraged and would not stand to their guns.—These, too from the awkward elevation of the platforms, did no damage but to the buildings of St. Vincent. In the course of the morning a fierce demand of capitulation was made by Clark, but it was firmly rejected by Col. Hamilton, who declared "he would not be awed into anything unbecoming a British subject." Our men were urgent to storm the fort; but Clark sternly repressed such rashness. In the evening of the same day, the British officer finding his cannon useless, in repelling the fire, of the enemy, and apprehensive for the result of being taken at discretion, sent a flag to desire a truce of three days. This Col. Clark thought too imprudent to grant, although he himself expected a reinforcement with artillery, on the arrival of the galley: but in return he proposed that the British garrison should be surrendered at discretion, and that Col. Hamilton, and Capt. Helm, (then a British prisoner,) should meet the American commander, at the church. In consequence of this proposal, the parties with a Major Hay, on the British side, met each other as desired. Clarke having rejected the terms of the British, Hamilton insisted on a proposal from Clark. The latter peremptorily adhered to his former proposition; Capt. Helm then attempting to moderate the excited feelings between the two officers, was reminded by Clark, that he was a British prisoner and had no right to speak on the subject.

Col. Hamilton then declared Helm free from his parole and liberated from that moment; but Clark would not accept his release, upon such terms; and farther asserted, he must return and abide the fate of war. The British officer was then informed that the firing would recommence in fifteen minutes after the beat of the drum. The gentlemen were now taking their course to their respective quarters, when Hamilton called out to Clark and inquired what his reasons were for rejecting his liberal terms; Clark replied with affected severity "I know the principal Indian partizans are in the fort, from Detroit, and I want only an honorable opportunity of putting such instigators of Indian barbarity, to death. The cries of the widows and orphans made by their butcheries require the blood of the perpetrators." So sacred continued Clark, "do I consider this claim on me, for punishment, that I think it next to divine, I would lose fifty men rather than not execute a vengeance demanded by such innocent blood. If you (Col. Hamilton) choose to risk your garrison, for such miscreants, it is at your pleasure to do so." Upon this, Major Hay enquired. "Pray Col. Clark whom do you mean by Indian partizans?" to which Clark replied keenly and promptly "I consider you sir, as one of the principal." The change in Hay's countenance was instantaneous; he turned pale, like one on the point of execution; he trembled to such a degree, as to scarcely stand. Hamilton blushed for his subordinates' behavior, in the presence of the American officers. From that mo-

ment Clark says he commiserated the British commander, and deeming him innocent, it is supposed, of the cruelties committed by the subordinates, determined to grant him every lenity in his power. The American officer said "we will return to our respective posts, I will reconsider your terms and let you know the result by a flag." Upon these being submitted, to a council of American officers, it was agreed that our terms should be moderated. They were so accordingly and communicated to Col. Hamilton, who acceded to them immediately. By this capitulation was surrendered, on the 24th Feb. 1779, Fort Sackville to the American arms; and the garrison was to be considered prisoners of war. On the 25th, the fort was taken possession of by Col. Clark, at the head of the companies commanded by Captains Williams and Withirington, while Capts. Bowman and McCarty the Kaskaskia officers received the prisoners. There is a tradition that Hamilton shed tears, when he discovered the smallness of the force, to which he had surrendered, but I find nothing of the circumstance in the Clark papers. The stars and stripes were again hoisted over Fort Sackville, never I trust to be again lowered to any *foreign* enemy, and thirteen guns were fired in commemoration of the Thirteen good old States, to celebrate the recovery of this most important stronghold on the Indian frontier. At this surrender 79 prisoners, and considerable stores were captured.

On viewing the strength of the fort, Clark was astonished at its easy surrender; though on further reflection believed that he could have undermined it, as he had thought of doing, during the seige, should not the galley bring his artillery; it stood within thirty yards of the river bank. Had that attempt failed, Clark's information was so exact, that with his cannon, he was convinced the magazines could be blown up the first hot shot that was fired. A few days afterwards it was understood that reinforcements were expected by the British from Detroit, down the Wabash; to capture these, Helm was sent up the river. The whole was surprised and stores were captured to the considerable amount of £10,000, or $50,000, with forty prisoners. On the return of this successful expedition, with the British flag still flying, Clark's galley hove in sight, so long and ardently expected and prepared to do its first service, by attacking the little river fleet, supposed to belong to the enemy; but suddenly, the ensign of our beloved country was hoisted to the mast-head, to the joy and triumph of our countrymen. These brilliant successes. over obstacles, which might well have satisfied an energetic officer, were not for a moment looked upon by Clark, as sufficient, but on the contrary, were only regarded by our countryman, as a stepping stone to other and prouder triumphs. Detroit now presented itself in full view to the bold and indefatigable Clark, as it had to the old Congress, and to Jefferson and to Washington, as will be seen in the 6th and 7th vols. of the Washington writings.

Recent intelligence had reached the former, that the British force at Detroit consisted of but eighty men, many of them were invalids and that the inhabitants were well disposed to the United States. This was a condition of things irresistible to Clark's enterprising spirit, and he determined on an attack upon this point with his present force.

But upon receiving despatches from Gov. Henry, promising a reinforcement of another battalion, it was deemed prudent to postpone the expedition, until such an imposing force was obtained. "Twice has this town, (meaning Detroit), been in my power," Clark writes Gov. Jefferson, from Kaskaskia. "Had I but been able to raise five hundred men, when I first came into this country" and again " when I was at St. Vincent, could I have secured my prisoners, and only had three hundred good men." This project though often revived and urged by Washington and Jefferson, and eagerly coveted by Clark, was not destined to be executed by military means, and Detroit was not surrendered by the British till June, 1796. Clark having re-appointed Helm commandant at St. Vincent, now embarked in the galley for Kaskaskia. These are the gallant enterprises which drew from the late preeminent chief justice of the U. States, in his life of Washington, the high encomium on Clark, "that these bold and decisive measures, which, whether formed on a great or small scale, mark the military genius of the man who plans and executes them." Yet with such a panegyric upon them, and from such a source, is it not most passing strange all circumstantial narrative of them, should have been utterly neglected until communicated by the late Gen. W. Clark, and published in the history of Kentucky?

To my mind the exploits of Clark have ever presented some of the most beautiful flowers of western history, and worthy of a cultivation, superior to any which I have been able to give them. Clark had now received renewed orders from Governor Jefferson, to select a point on the Mississippi river below the mouth of the Ohio, and to fortify the same. A point was now established about five miles below the Ohio, above Mayfield's creek and opposite to Island No. 1, according to our present topography. A most elaborate statement of the American claim to the Mississippi, was drawn up by Mr. Madison on the 17th October, 1780, for the instruction of our ministers in Paris, then negociating peace with Great Britain. In this paper (which will be found in Pitkin's United States, 2d vol.) reference is specially made, among other weighty considerations, to the fact that "the United States had obtained possession of all the important posts and settlements, on the Illinois and Wabash rivers, rescued the inhabitants from the British yoke and established civil government in its proper forms over them. They have, moreover, established a post on a strong and commanding situation, *near the mouth of the Ohio.*" "It was in the spring of 1780 that this fort was established by Clark, in obedience to Gov. Jefferson's orders. These had been given first on the 28th June, 1778, which exclusively place the public movement of taking posts on the Mississippi in order tos ecure our claim to that river, to the credit of that statesman's comprehensive mind, executed by his fitting compeer in the field. From this fort, called fort Jefferson on the Mississippi, sometime in 1781, Clark proceeded on foot into the interior of Kentucky, in company with Harlan and Harmar Connoly. The nearest date I can find to this circumstance is a letter from Governor Jefferson, of the 19th April, 1781, but which was not received until Clark arrived at the falls, the 11th July following. In this etter the Governor ordered an expedition against the Indians which

Clark had already anticipated. It was a rare event in Clark's career to require orders from any source, but his own fertile genius. This party of three which I have just mentioned (Clark, Harlan and Connoly,) having painted themselves like Indians, in order to travel with greater safety advanced as far as the Tennessee river: this they found foaming with high water, and Indians were hunting on both of its banks. Our chief and his companions quickly fastened a raft together of logs with grape vines, upon which to carry their rifles and clothes, and dashed into the river in its flooded state. The party had got some distance before the Indians perceived them, who, when they discovered them, quickly exchanged whoops of intelligence. Clark and his companions were not however without resource; availing themselves of a creek, which put in, on the opposite side of the river, placing it between them and their pursuers, they landed below that stream, while the Indians were obliged to ascend it in order to find a passage. Thus our countrymen escaped, and having landed, proceeded on their destination. So complete was their disguise, so perfect their imitation of Indian costume, that on approaching a fort of our people situated on a river, a branch of the Cumberland (it is presumed,) they were mistaken for Indians. Nor was it, until the name of Clark was called out loudly, (so well known to the backweodsmen were his exploits at that day), that the party could gain admission. On the route the party met with a singular incident: it was a party of forty immigrants, actually starving from the inexperience of the hunters among them, in killing the buffalo: the only game in their reach. The hump, it seems, in the shoulder of the animal, requires in order to strike the heart, an allowance not easily made by an inexperienced eye. This source of error was unknown to the new comers, and all their balls failed (though they struck), to kill their objects. Clark and his companions soon set them right with the first herd of buffalo they met, after their rencounter, by shooting fourteen before they stopped. It is said in hunting this animal, skillful hunters arrange themselves so, as to run parallel with the herd, in which position, they may run, kill and load again successively as far as they can run. The rescued *movers* as we term them, were almost ready to look upon Clark and his two coadjutors, as something more than mortals. A party thus unexpectedly rescued from starvation in the midst of game, may well have been disordered in their judgments. On reaching Harrisburg, Clark found a concourse of the people gathered there, from every direction, waiting to enter land in the Surveyor's office. This was the subject which engrossed all men's thoughts with the same avidity amidst the wild and hostile forests of Kentucky, as in the crowded stock market of a commercial city. To propose to men thus keenly excited to acquire homes and lands, a military expedition against the Indians, (which was Clark's object in taking this perilous journey, and which was demanded by the interests of the country,) would have been worse than useless. Should the more gallant and generous engage in it, they would leave the selfish and grasping speculators at home, to despoil them of the richest fruits of the country, while they were defending it. Brigadier General Clark (for he had now been commissioned by Governor Jefferson, as such on the 22d of January, 1782), under these cir-

cumstances, with his usual respect for the law and its officers, proposed to May, the surveyor of Lincoln county, to shut up his office, and then all would turn their attention to the defence of their country.

This, the surveyor said, he had no authority to do; but, he added, if Clark would issue an order to shut the office, he would be the first to obey it. The General accordingly caused a written order to be placed on the door of the Surveyor's office, notifying all persons, that the office was closed, by an order from Gen. Clark, until after an expedition could be carried against the Indians, north of the Ohio.—This measure, together with the high military popularity possessed by Brigadier General Clark, commanded any number of volunteers, in addition to his own State regiment, then in garrison at Fort Nelson, in the heart of the present city of Louisville. It may be interesting to know, that the site of the principal fort in the western country was opposite to the Louisville Hotel, on Main street of that city. This expedition, commanded by General Clark, consisted of two regiments, one under the command of the gallant Logan, ever the right hand man of Clark in Kentucky, and Col. Linn, the grandfather of the lamented Doctor Linn, late the high minded and gentlemanly Senator from this State.

This was the first offensive expedition of any consideration undertaken by the Kentuckians, against the North-western Indians. The force amounted to nearly one thousand men, exactly nine hundred and ninety-eight men, according to a written manuscript of Capt. Patton, a volunteer in the expedition, and one of the oldest pilots over the Falls of the Ohio. The secresy and dispatch, which ever marked the movements of Clark, attended their progress on this occasion. The Indian town of Pickaway, somewhere on a branch of the Big Miami, (it is believed, for distinct topography is disregarded in most of our early western documents,) was approached without discovery, and as soon assailed. A short conflict ensued, in which seventeen of the enemy were slain, with an equal loss on our part, overwhelming as our party was in numbers. The residue of the Indians fled, the town was reduced to ashes, and the gardens, with the fields, laid waste. Such are the melancholy scenes in a war with barbarian tribes, who, having no large body of non-combatants, distinct from the military class, can only be made to feel the horrors of war, by bringing them home to the whole society, destroying their towns and fields. It is indeed an inglorious warfare, over which humanity weeps for both parties: the triumphant civilized man, thus defending (possibly, unavoidably,) the endearments of agricultural and cultivated life; and the untutored son of Nature, fiercely vindicating what he deems the rights of the forest and the chase.

From Pickaway, Col. Logan was despatched against another Indian town, some twenty miles distant, which was likewise destroyed, as well as a British store, from which the Indians derived their supplies of arms and ammunition, supposed to be Lorramie's, upon a creek of that name, forty-seven miles north of Dayton, Ohio. The latter object formed the principal one of the expedition. This had been an English trading post, in 1751, and had been captured by the French, in that same year. Owing to these offensive operations against the

savage enemy, Kentucky enjoyed some breathing time; while the Indians were engaged in rebuilding their habitations, and what was still more important, while they were compelled to hunt, in order to supply the loss of their crops. In August, of the next year, 1782, Kentucky experienced the severest blow ever struck by the Indians, at that daring and energetic population. It was at the Blue Licks, on Licking river, where the Kentuckians out of one hundred and eighty one men, lost seventy nine men, and twelve were wounded. This battle from its obscurity, like that of Kenhawa, shall occupy our attention in the next lecture. This loss was experienced when the militia men in Fayette county only amounted to one hundred and thirty men, as is stated in a letter of Colonel Boone's, to the Governor of Virginia, which I found among the Illinois papers in Richmond Virginia. So deeply had the alarm of Indian invasion penetrated the country, that Boone's letter declares ("that another Indian campaign in the country would break up the settlement.") In consequence of this destructive battle and pressing representations from Kentucky, Clark was ordered to prepare another expedition, into the Indian country. This he accordingly did, assembling one portion of his troops at the Falls, and the other at Bryant's station, near Lexington, Kentucky: both were to wait at the mouth of Licking river, opposite to the present city of Cincinnati. General Clark, with Logan and Floyd for his Colonels, (the latter, the father, of the late Governor of Virginia, of that name) assembled at the spot appointed, where ten hundred and fifty men, mustered for the campaign. On the 4th November, 1782, this formidable invasion left the Ohio river; and in six days' march, surprised the principal Shawnee town on the Miami river, now in the teeming State of Ohio! "Immediately detaching strong parties to different quarters, in a few hours, two thirds of the town were laid in ashes and everything destroyed."

"The loss of the enemy was ten scalps." I use Clark's own words, to Governor Harrison, the father of our late lamented President, seven prisoners and two whites retaken; ours was one killed and one wounded; after lying four days in the town and finding all attempts to bring the enemy to a general engagement fruitless, the detachment retired, as the season was far advanced and the weather threatening. Another British trading post, at the head of the Maumee or Miami, of the lakes was destroyed by Col. Logan. The property in it was a great amount and the quantity of provisions *burned* surpassed all idea entertained by our people of the British stores for the supply of the Indians.

This campaign, trifling as its execution seems in comparison with the wholesale slaughter of what is called civilized war, on the eastern continent, put an end to the formidable invasions of Kentucky. After this period, the country was only exposed to straggling plunderers and small parties of warriors. Such an effect is fairly to be attributed to so overwhelming an exertion of military force, so recently, after the disastrous battle of the Blue Licks, which shall occupy our attention on the next evening. Clark continued in the command of the Virginia troops at the Falls (of the Ohio), ever superintending the defence of the country, with sagacity and energy. At one time he had

an armed galley plying on the Ohio; this it is said, had an excellent effect in arresting Indian parties; indeed it is reported to have stopped an Indian invasion, that had been proposed to cross the Ohio; near the upper station of this vessel. This expedient did not last long, the aversion of the militia to working on the water, together with the reduction of the regular force, compelled the General to lay aside the galley. The plan so novel on the western waters, at that day, shows the military readiness of its author, who was never at a loss for expedients suited to his situation. In July 1783, I find a letter to Clark from the Gov. of Virginia, discharging him from command, in the most honorable terms.*

I must not here omit other honors and rewards conferred by Virginia, upon her favorite officer in the West. In 1779, the Assembly of Virginia voted a *sword* to be presented to Gen. Clark, "as a proof of their approbation of his great and good conduct and gallant behavior."

This was forwarded to him from Lieutenant Governor Page, by the hands of Captain Rogers; the resolution of the House I could not find, in the records at Richmond. With this sword, although one of Clark's brilliant rewards, is connected a most mournful portion of his history. His mind had been wounded by the neglect of Virginia, to settle his accounts for the great expeditions, which had stretched the Republic to the Mississippi river. Private suits were brought against him for public supplies obtained on his *personal* credit, when the credit of the commonwealth was a cypher: these swept away his private fortune. By this injustice he was compelled to find his home at Major Croghan's near Louisville; this was his last home. In the day of Virginia's adversity, the spirit of the hero had never failed his country, it now sunk under her indifference in the time of her prosperity! He never recovered the energies, which had stamped him in the noblest mould of a hero. The genius which had burned brighter amid the strife of battle, was quenched by public ingratitude. At the same time, it is feared a too ready and extensive conviviality (almost unavoidable by an old military commander,) completed his ruin, and steeped him in that forgetfulness, which had by the ingratitude of his country, become his only happiness. In this mood, distracted by the bitter recollection of "benefits forgot," feeling with the great poet of our language, that "Bite, bite ye bitter frosts, ye bite not half so keen, as benefits forgot," Clark took the sword and snapped it into atoms. The particulars of this transaction, I have not been able to obtain. General Jessup, at my request made particular enquiry of General Clark's favorite sister, Mrs. Croghan, with whom he spent the last sad remnant of his life: he was living there, the only time I ever saw the distinguished hero. All I have been able to learn of this sad affair is, that, when interrogated on this sore subject, "the veteran was agitated, frowned, and would make no distinct reply." Although no doubt can at this day be entertained of the inadequacy of a sword to testify the sense of value in a great commonwealth for such services as Virginia received from General Clark; there can be as little doubt

* See the Governor's Letter, Page 490, History of Kentucky 2d ed.

that in the infancy of western prosperity and the unsettled condition of the western territory, their grand value could not be duly appreciated,* though it is due to Virginia, to mention her grant of one hundred and fifty thousand acres of land opposite to Louisville, emphatically known, as the *Clark grant*, to compensate the heroes of Kaskaskia and Saint Vincent.

How delicately and magnanimously Virginia redeemed her neglect of Clark, will soon appear. The remaining services of Clark draw rapidly to a close; I have met with none after his most honorable discharge in a letter from Governor Harrison, in 1783, till 1786. Depredations continued to be made by the Indians, on Kentucky. A little after this period, say from 1783, to 1790, an estimate was made by the late Judge Innes, of Kentucky, that fifteen hundred persons, including women and children, had been killed or taken prisoners by the enemy, south of the Ohio, besides taking two thousand horses and other property to the amount of fifty thousand dollars. To punish these wrongs; or in the more lordly style of other belligerents, to take satisfaction for the past, and indemnity for the future, another expedition was resolved upon, against the Indians on the Wabash.—And who but their old and favorite leader could be thought of to command it? Clark proceeded, on this command, to Vincennes, the old scene of his triumph, to join the troops. This point of rendezvous, so far advanced in the western country, forcibly indicates the progress of western settlement. About one thousand men assembled at this place, awaiting the arrival of transports, loaded with provisions for the expedition, which were ascending the Wabash. The low water in that river delayed their arrival; the troops were thus detained nine days at Vincennes. On the arrival of the boats, the provisions, when opened, were discovered to be more than half spoiled: and those which had been taken by land were all exhausted, except a few bullocks.

With irregular troops, inactivity is almost equivalent to defeat; idleness, amidst the privations, breeds inexpressible ill-humors. A spirit of discontent manifested itself in camp, even before the arrival of the boats, and before the condition of the provisions was known. It afterwards showed itself more openly.

The army, if not too magnificent a term, was placed on short allowance and marched towards the Indian towns, which were the object of attack. Previous restlessness soon became habitual disobedience, "fomented by some officer of rank, as an officer in the expedition wrote me, social, I construe it, civil influence at home, were displeased with the General."

This state of things eventuated in three hundred men deserting in a body when they were informed they were but two days' march from the Indian villages. In vain the gallant veteran, who had never yet led his countrymen to defeat, addressed the mutineers in the most soothing and earnest terms of entreaty, to stay; In vain the noble old soldier shed tears over the disgraceful conduct of his men, blighting as he must have felt it, to his former well earned fame. The evil spirit

* It mainly gave her a dominion of 330,000 square miles, an extent exceeding the European dominions of Great Britain and France, united.

of discontent possessed the men and they returned home without seeing an enemy, and without striking a blow. Still, there was a residue left after the desertion, enormously greater than his old gallant bands that had penetrated into the heart of the Indian country, spreading dismay and destruction among the enemy.

But something else, I fear, was wanting on this expedition than numbers, without which, the greatest numbers only increase the spoil of an enemy. It was a manly subordination to orders, and an honorable confidence of the men in their officers and commander. Never had Clark led so unfortunate a party; hitherto, victory seemed to perch with delight on his banner, and to conquer all opposing difficulties to meet them, had alone been sufficient. At the same time, mournful as the truth is, and reluctantly as it is wrung from the lecturer, it must be confessed that General Clark was no longer the same man he had been in his heroic days. He soon became a ruin—a venerable ruin. I will not adopt the lofty "quotation" of Joseph H. Davies, on visiting him in his decline, "an archangel ruined." But I must drop the curtain on the days of a great man's fall. May it caution inferior men, who cannot have the griefs and who have never rendered the great services of Clark, to alleviate their intemperance.

I pass over some incidents in Clark's career, such as services for a short time under Baron Steuben, in Virginia, during the revolutionary contest, as also his appointment as a "Major General in the armies of France, and commander-in-chief of the revolutionary legions on the Mississippi." They are not important enough, at this day, to detain your attention. I hurry to perform a more pleasing duty, it is to mention the late, though most honorable reparation of Clark's wrongs, made in the handsomest terms, and with substantial liberality, by the legislature of Virginia.

At the session of the Virginia legislature, in 1812, a bill was introduced and passed the same day, requesting the Governor to procure a sword, with suitable devices, and to present the same to Clark, with an expression of the gratitude and friendly condolence of Virginia.—and granting him for life a pension of four hundred dollars per annum. This duty was performed by the late Gov. Barbour, by addressing Clark a letter, whose dulcet tone can not fail to impress every hearer.* I have been charged with enthusiasm on this subject, I submit the justice of the charge to you. Such are the life and times of General George Rogers Clark; I shall not attempt to bias your minds by any further comments of mine on his actions. They were such as have been laid before you. I have derived my authority from incontrovertible documents; you would not distort them, if it were in your power, they form a bright portion of western fame: may its contemplation lead us all to higher efforts of patriotism which shall influence our actions as members of society, as voters, as members of the too bitter parties into which our excitible countrymen are divided; not I fear always recollecting that political conduct ought no more to be exempt from the restraints of truth and justice than private actions.

*See the letter and the preamble of the act, page 536, History of Kentucky, 2d edition.

Such a love of our country, her glory and happiness would extract from party, its publications and partizans, their worst sting, their most malignant poison.

I have thus portrayed as I best might, the Hero of Kaskaskia and Saint Vincent, the founder of Kentucky, and the warrior of the west. I have given him the prominent and leading part, in the whole drama of western conquest and settlement. This conflicts with a popular notion extensively credited beyond the western country, that Daniel Boone was the *principal* leader and most efficient spirit, among the pioneers of Kentucky. No mistake can be more profound. Far be the ignoble task from me to depreciate the real merits of Boone. I adopt the language of the poet "nothing extenuate nor aught set down in malice." He was an unrivalled hunter, an honest and kind hearted woodsman, and a good soldier in a subordinate capacity; but at no time of his life, did his abilities either natural or acquired, rank him as the leading spirit of Kentucky in counsel or action. He came to Kentucky first as a private hunter, from North Carolina, and afterwards as the agent of the great land company of Henderson and Co. But in no one expedition greater than a scouting party, was Boone a leader.

It is true he participated in the battle of the Blue Licks as will be seen hereafter; and although he gave excellent advice on that occasion, where its adoption might in strong probability have averted, if it had not reversed the fortunes of that disastrous day: he was not the leader, but Col. John Todd of Fayette county. By the testimony of all the pioneers and their records Boone was never regarded as a leading spirit in these times, that tried men's worth, as gold is tried in the cruble. Did Boone ever *conceive* much more LEAD such expeditions as either the mission to the Virginia Convention in 1776, or the Illinois campaigns in 1778 and '79, or those of 1781 and '86? No these were the work of Clark. The latter was emphatically the leading and master spirit of these times, by the admission of all contemporaries and next to him John Floyd and Benjamin Logan, John and Levi Todd, Colonels Christian, and Hardin. But here I must close the career of General Clark, who lived the remainder of his life the *honored* guest of Major Croghan, and died in 1817, the noblest Captain of the west.

NOTE. The foregoing article is the second of a Series of lectures, delivered by the author before the St. Louis Lyceum. He intended to have handed us the first of the series for the present number, but gave us the second. The mistake was not discovered until the proof was presented for examination. But in as much as the article is complete within itself—we concluded to let it remain. Gen. GEORGE ROGERS CLARK may be regarded as the hero of the west, in the days of the revolution, and the author is greatly to be commended for his labors in collecting and preserving many interesting and important facts which have escaped the notice of other historians.—EDITOR.

ART. IV—EDUCATION.—NO. VII.

THE MORAL DISCIPLINE OF SCHOOLS.—(*Continued from page* 129.)

The following is the last of a series of numbers on Education from the pen of our highly valued correspondent Joseph Ormrod, Esq., of Mo. And now that the Essay is complete we earnestly invite our patrons to commence with the first number, and not only read, but study the entire subject. Could parents be brought to feel the same degrce of interest in the welfare of their children that the author has evinced for the public at large—enlightened by the philosophy and practical instruction contained in his Essay—it would not be long before a change would take place in the social condition of our State, that would rejoice the heart of the philanthropist.

We sincerely regret that the circulation of this able and valuable treaties is confined to our Journal. We desire that it should find a place in every family, and we trust that the author will yet bring it before the public in a more convenient and useful form.—Editor.

I have already, in my introductory remarks to the subject, explained the true object of education, as being that of promoting the well being and happiness of the individual. The mind of the pupil must not only be disciplined, so as to give him the power to think and reason, but in such a way as to make him in love with truth and virtue.

For intellectual attainments, beyond what are actually necessary for the business of life, are only to be regarded as of use and value, in proportion as they contribute to the power of moral perception, and as they may have the effect to confirm a man in virtuous principles.

Intellectual culture, in itself, is, indeed, highly conducive to these ends, yet, when circumstances are unfavorable, as they too frequently are, this species of cultivation alone, often gets perverted from its legitimate uses, and is applied as a means for the accomplishment of bad ends.

Happiness is the surest test of virtue. A virtuous man, it is true, may be, and unfortunately sometimes is, unhappy, but his unhappiness, when such is the case, is produced by outward circumstances,—by oppression, injustice, or misfortunes of various kinds, to which all, both virtuous and vicious, are equally subject; or, his natural temperament and organization may be such as greatly to impair the happiness he would otherwise enjoy.

But no outward circumstances, however favorable, nor any external advantages, however great, can compensate the vicious man for that

moral wretchedness within, which never fails to attend upon evil-doing. His own self-reproaches embitter his enjoyments, and happiness becomes impossible to him under any imaginable state of things.

The habits, tastes and principles, acquired in youth, mostly form the future character, and continue through life; and thus the child becomes the father of the man. This sentiment, impressed upon the mind, would, of itself, seem sufficient to stimulate all concerned, in the effort rightly to train up youth, to do their utmost to imbue them with virtuous feelings, to fix in their minds broad and generous principles of judgment and action, and sedulously to guard them against the pernicious effects of bad example and the influences of evil communications. There is much in society, as at present constituted, to call forth the regrets of the philanthropist—much which he may deplore, but which he will in vain seek to remedy. Society has been badly educated, and the habits and associations of its members, for the most part, have become too inveterate for any ordinary influence to remodel. When a child has been permitted to attain to manhood without any suitable moral and intellectual culture, it is then beyond our art to effect any change or reformation in his character. If bad habits are predominant in him, they will continue to prevail and overpower every other consideration: he may, possibly, be made to 'see the right but will still the wrong pursue.' Society is in a similar condition, owing to the great defects in our system of education, hence the attempts of benevolent men to produce any particular reformation or change upon its habits or pursuits, almost invariably result in failure. *Wise* philanthropists, therefore, will base their hopes of amendment upon what can most certainly be effected upon the rising generation by improved methods of instruction, they will accordingly, direct their efforts to the advancement of the science of education, and to that almost exclusively. "Benevolence is short-sighted, indeed," says Dr. Channing, "and must blame itself for failure, if it does not see in education the chief interest of the human race."

I cannot better express, in brief terms, what I would further say in regard to all that should be comprehended in our views of education, than by using the language of the estimable writer whom I have just quoted,—"The true end of education we have again and again suggested," says Dr. Channing, "is to unfold and direct aright our whole nature. Its office is to call forth power of every kind, power of thought, affections, will and outward action; power to observe, to reason, to judge, to contrive; power to adopt good ends firmly, and to pursue them efficiently; power to govern ourselves and to influence others; power to gain and to spread happiness. Reading is but an instrument; education teaches its use. The intellect was created not to receive passively a few words, dates and facts, but to be active for the acquisition of Truth.

"Accordingly education should labor to inspire a profound love of truth, and to teach the processes of investigation." * * * * *

"In proportion as the child gains knowledge, he should be taught how to use it well, how to turn it to the good of mankind. He should study the world as God's world, and as the sphere in which he is to form interesting connexions with his fellow creatures.

"A spirit of humanity should be breathed into him from all his studies. In teaching geography, the physical and moral condition, the wants, advantages, and striking peculiarities of different nations, and the relations of climates, seas, rivers, mountains, to their characters and pursuits, should be pointed out, so as to awaken an interest in man wherever he dwells.

"History should be constantly used to exercise the moral judgment of the young, to call forth sympathy with the fortunes of the human race, and to expose to indignation and abhorrence, that selfish ambition, that passion for dominion which has so long deluged the earth with blood and woe. And not only should the excitement of just moral feelings be proposed in every study. The science of morals should form an important part of every child's instruction. One branch of ethics should be particularly insisted on by government.

"Every school established by law, should be specially bound to teach the duties of the citizens to the State, to unfold the principles of free institutions, and to train the young to an enlightened patriotism. From these brief and imperfect views of the nature and ends of a wise education, we learn the dignity of the profession to which it is entrusted, and the importance of securing to it the best minds in the community."

Although, in the education of youth, the intellectual faculties can scarcely be too much excited, even should the teacher succeed in creating an insatiable craving for knowledge, yet, I may be permitted to observe that the intellect is far too exclusively regarded, and to the neglect of the equally or still more important consideration of the moral faculty, to which the former should, indeed, be made subservient, and become, as it were, the hand-maid of the latter. Cultivation sharpens the intellect and makes it more fertile in resources for the accomplishment of the ends in view, whether those ends be virtuous or vicious. It confers upon the individual additional power for working out evil as well as good; and, accordingly, as the moral sentiments are concerned or not in the objects to be attained, will be the life and conduct of the individual thus impelled or thus instructed.

If his intellect has been developed under the supremacy of those sentiments, the result will be virtue and a wise intelligence; but if otherwise, it may be, and often is, of the opposite tendency; and should vicious propensities predominate, the intellectual cultivation which he has obtained will but enable him to do the more mischief and make him, in consequence, a worse man.

In that case he will not fail to become the victim of his own bad passions, and a bane to society—he will violate the moral law of his nature, and suffer the penalty which assuredly follows upon every such infraction. On the contrary, when his intellectual acts in accordance with his moral nature, whatever may be the disturbances to his happines from without, within, and as regards himself, there will be harmony and peace, he will be self-satisfied, and enjoy a sort of moral gladness: no self-reproaches will embitter his reflections, and no accusing conscience disturb his repose. The object of our enquiry then, on the present occasion, and that which we must endeavor to ascertain, is this,—what are the methods, or what species of training

is it by which we can best succeed in directing all the powers of the youthful mind upon worthy objects, and in such a way as to secure to the individual his well-being and happiness in every pursuit of life?

In prosecuting this enquiry it is important for us to know not only how we are to conduct ourselves, and what means we are to employ in order to bring about the wished for results, but where and when we are to begin our operations. And in thus treating of the subject, I cannot consistently with its nature and my own views, pass by all consideration of the proper training and discipline of children by their parents, as well as regards what devolves as a duty upon the public instructor. For, unless parents properly discharge their duties, any thing which the teacher can do towards calling out the moral powers and regulating the feelings of his pupils will avail but little. Very much depends upon early or first impressions, and were I to omit all notice of the conduct proper to be observed towards the child in its infant state, and while under the exclusive care and management of its parents, I should pass over that period in its education in which the future character of the man, for the most part, takes its form and pressure, according to the treatment or management it gets, or the circumstances in which it may be placed. I, therefore, solict attention to a series of remarks, which, though having no immediate concern with the duties of the teacher, have yet a very important bearing upon the results which we are desirous he should produce. We cannot at too early a stage of the infant mind, begin to exercise over it our care and vigilance, for it is undoubted that at a very early period, even before the lips can articulate a syllable, it may receive impressions which will, in some degree, determine its character through life; and this is especially true in regard to its temper, its combativeness, and the propensities generally, as affected by the judicious or injudicious conduct of those concerned with its training and protection.

The infant, therefore, becomes the subject of education; it demands from us a special management from the time it comes into the world, and acquires consciousness. Parents, therefore, come under obligations at once to exercise a vigilant care over all the influences to which their child may be exposed; and it devolves upon them to reflect deeply on all that it concerns them to do,—to make themselves acquainted with the means by which they can most successfully acquit themselves of their solemn duties. The fate of the child, at this, the most interesting period of its life, when it is most susceptible to impressions of any kind, is in the hands of its parents; and it is for them to make that impression, and give that direction to the mind, which is to decide its future character. Since then, we have it in our power so early, to stamp a character upon the infant mind, we cannot, I repeat, be too guarded in our conduct, or too solicitous as to the nature of the impressions we convey, or which may be conveyed without our agency. In every stage of life, we receive many impressions affecting our minds and morals, which are not conveyed by words, oral or written, but which yet exert an influence upon our characters and conduct as great, or far greater, perhaps, than any language can so exert. This is more peculiarly the case in regard to the child, in whom imitation is almost the only active faculty;

to whom existence is new, and whose sensations are vivid, in proportion to their novelty. There is a natural language, which is intelligible to it, long before it can understand or give utterance to an articulate word. Sounds and gestures affect it, and affect it strongly, for its mind, indeed, is not capable of being acted upon in any other way. We should, therefore, when addressing ourselves to the infant, carefully refrain from the use of loud and harsh language, from any expression of countenance or passionate demeanor, which may produce disagreeable sensations, particularly such as are likely to affect it with terror.

We should avoid exciting its obstinancy by striking it, ever so lightly, if in any angry mood, or by suddenly snatching out of its possession anything which we wish to deprive it of, that has been improperly placed in its hands. We shall succeed far better in this latter case, by laying hold of the obnoxious article, whatever it is, and withdrawing it in a very mild, but at the same time *firm* manner, for we must at all times act towards it with decision and consistency.

Inconsistency is one of the worst spoilers of children. A consistant course, although it may not be the best course, is preferable to any other not steadily persisted in. When a young child gets into a petulant humor, it ill becomes us to get into the same humor. On such occasions, we must endeavor to divert its attention and interest it in some way; by music, the blowing of a horn, or by any other means likely to be effective. Soothing sounds, light and repeated touches or strokes with the hand, will have a favorable influence upon its feelings and disposition. A young infant properly treated, will seldom cry unless from some ailment; when, therefore, it is very cross and cannot be quieted, we may conclude that it is suffering pain or uneasiness of some sort, and act accordingly.

To guard ourselves from errors in the management of a young child, we should take into our consideration the state and condition of the infant mind in its primary stage of existence, enquire how it is first acted upon, and regard the circumstances with which it is ordinarily surrounded. By so doing, and making a careful study of all that relates to these matters, we shall be the better able to arrive at practical conclusions. This is the only enlightened basis upon which we can conduct our enquiries, and by which we can attain to a knowledge of those principles which should then and subsequently govern us in all that we attempt to accomplish: we can get them, indeed, in no other way.

In a former article, and while treating of Intellectual Discipline, I undertook, speculatively, to show what the state and condition of the infant mind is, so far as it can be regarded in its intimate nature; and I beg leave to refer the readers of the 'Journal' to No. 5, on Education, for my remarks on that particular.

I there regarded the infant mind as vacant, and the infant faculties as mere susceptibilities, capable of being directed in any way, for good or for evil, according to the influences and circumstances under which they are first brought into exercise—and subsequently developed. All the ideas and knowledge we possess, I there explained, have been

acquired by means of what we originally obtained through the medium of the senses; and that in the first instance, therefore, in seeking to make impressions upon the mind of the child, we can avail ourselves only of the organs of sense; and that the nature of the sensations received by it, are all important for determining its future character. I have heretofore, also, in a previous article, noticed the very objectionable but prevalent practice of giving to an inquisitive child *witty* instead of correct answers, 'of cajoling and bantering it for amusement, and placing before its mind false and ludicrous images.' If the object be to prevent the faculties and utterly spoil the child, no means can be resorted to which will more effectually answer that purpose; it will soon, under this treatment, become forward and ungovernable, and loose both its docilety and its reverence. Mind is too sacred a thing to be thus tampered with, and the pernicious practice alluded to as so common, evinces the little knowledge or reflection generally to be found among men, of the consequences sure to result; while at the same time it exposes the barreness of our present system of education.

I have seen parents, in thoughtless playfulness, teach their children to strike and to become pugnacious, and even to *spit* at and '*curse*' those who were jeering and playing with them. Is it to be wondered at then, that there should be so many bad and incorrigible children when we witness schooling such as this, given to them by their own parents?

The child gets its most impressive lessons from amid the circumstances in which it is placed. "It takes lessons from every object within the sphere of its senses, from every associate, from every smiling and frowning countenance, from the pursuits, trades, professions of the community in which it moves, from its plays, friendships, and dislikes, from the varieties of human character, and from the consequences of its actions." These all require our circumspection and care of selection for the child, that he may obtain what is good and profitable from them, and be guarded against what is evil.

Numbers there are so simple and so little informed as to the nature of a child's mind, that they expect to be able to train it to virtue and truth by mere precept, of which they make a most unmerciful use.

But children are far more influenced by the living example which is around them, by what they see done by others, than by any amount of precept, and this, indeed, is the case with adults.

Precepts, when oft repeated, weary and disgust, rather than edify them, particularly when the monitor himself does not observe his own moral rules—a very frequent and most important omission—a circumstance which the child will not fail to remark, for in such matters children are nice observers. Parents and others concerned, should be careful not to do any thing in presence of their children which they are desirous that the latter should avoid doing. It behooves us also, on such occasions, to be guarded in all that we say, for a child, when seated in the corner of the room, unoccupied and apparently heedless of what is going on, is receiving, perhaps, more ideas in half an hour, from the conversation we are engaged in, than he gets from his teacher in a month. His attention, at such times, is awake, and he loses

no word that is uttered, for the ideas and expression thus acquired by him, are for good or for evil according to the nature of the conversation. By thus guarding ourselves in the presence of children, both as to what we say and what we do, we are effecting two things at one and the same time, while we are edifying the children about us, we are disciplining our own minds and feelings.

The moral lessons given to children should be of a practical kind, so far as they can possibly be made so; occasions must be sought after for exercising them in those feelings and that conduct which is enjoined upon them; they will thus become confirmed in the habits it is wished they should acquire.

The best feeling we can infuse into them is love for the species; this is the foundation of all virtue; it is that which gives us an interest in the fortunes of the human race. Destitute of feelings of philanthropy, we should find no entertainment in the reading and study of history, or, in any of those details we so frequently meet with of an advance made in civilization among whatever people; we should take no interest in the announcement of improvements, inventions, or the founding of new institutions, &c., all of which the true philanthropist takes so much delight in contemplating.

"Virtue," says an eminent philosopher, 'is the habitude of directing our actions to the public good, the love of virtue is but the desire of the general happiness; virtuous actions are those which contribute to that happines." Plato entertained a similar sentiment when he said, "*In seeking others good we find our own.*" The teacher, equally with the parents, should watch over the conduct of his pupils, and take every opportunity of inculcating moral lessons; he should excite their benevolence, and direct their sympathies to proper objects.

He will have frequent opportunities of pointing out to them the evils of malevolence and ill nature, on occasions when he sees such passions active, and of showing the happy effects produced upon the mind by a contrary conduct. But that his lessons in this way may be efficacious, he must himself, by a mild and amiable demeanor, endeavor to win the love and sympathies of his pupils.

He must give them habits of cleanliness and good economy in seeing that they do not soil or in any other way abuse their books, or any thing else in their care, and that they pay a proper attention to neatness in their persons and dress. These may appear small matters to be introduced into a grave treatise on education like the present, but in regarding the effects to be produced upon the mind, that which, in itself would seem to be of little significance, rises into sufficient importance to be urged as a duty.

While, however, I am thus admonishing the teacher of the obligation he is under strictly to attend to the morals and habits of the pupils under his charge, so as to guide them in the ways of virtue and truth—repress as much as possible, their evil propensities, and excite into activity, by every means he can devise for that purpose, the better feelings of their nature, I am not unapprised of the many difficulties he will have to contend with in effecting anything considerable in this respect. His pupils are only under his care for a limited portion of their time, and in whatever way the residue of that time is spent—

whether in favorable or unfavorable circumstances—he can exercise no direct control over their conduct. It most frequently happens at such times, that they are left to their own guidance, and exposed to evil influences.

That he may be enabled successfully to carry out his moral discipline, even with the most enlarged views of his duties, and the soundest judgment, it is essential, as I have repeatedly observed, that parents should co-operate in his endeavors and aid him in this as in other respects; for without their auxiliaries in moral and intellectual training both, his efforts will often be labor in vain.

Unfortunately it too frequently happens that parents, instead of affording aid to the teacher, are, by their conduct, and for want of enlightenment, employed in counteracting the good work which he so sedulously strives to accomplish, and rendering his efforts powerless; while at the same time they are disposed to make him accountable for much of the delinquency they may observe in the pupil.

But something considerable may still be effected by the teacher who is fully competent to the task, and under the most discouraging state of things, if he will but laudably persevere in his efforts.

He must employ *tact* as well as judgement, and that which he cannot directly accomplish he must attempt by means indirect, and in every commendable way. I might pursue the subject of moral discipline still further, and regard those authors and studies, to be introduced into schools, which are the best adapted to the object of elevating and refining the minds of youth, but time and opportunity are wanting for discussing these in any satisfactory manner; nor is it of much importance that I should attempt it, since there will be no great difference of opinion among competent judges in regard to the selections to be made; and I have perhaps said enough. I have, indeed occupied a large space in the 'Journal' with the subject of Education, for many consecutive months, and giving my subject a much wider range than at first I designed doing.

I may, however, observe by the way, in relation to the objects in view, just mentioned, that select standard poetry, judiciously explained and illustrated, would in part answer the intention. Poetry, too, may be employed as a suitable means of culture for the imagination, a power which was given to us for some purpose, and which, therefore, needs to be cultivated, we may presume, as well as the reason. And further, in regard to the subjects which should be selected and presented to the children and youth in our schools, I will content myself with extracting a short paragraph from an interesting publication by Mrs. Hack, entitled "Winter Evenings." The authoress thus remarks in her preface to the work:

"When the 'quivering light' of reason dawns on the youthful mind is not the 'checquered field of man' the natural and most attractive object of its speculation? Every child hopes to be a man. The business of childhood is to prepare for the full exertion of the mental powers when they shall arrive at maturity. Then will not those unfolding powers be stretched and stimulated in the safest and wisest manner by following the natural impulse of hope and curiosity? Let the actions, and enjoyments and sufferings of men, form the subjects of

the contemplation of children. Care, indeed, will be necessary in selecting, not only such scenes and events as they can entirely understand, but such as ought to be presented to them.

"Examples of courage, of patience, of fortitude, of generosity and benevolence, and above all, of reliance on the Supreme Disposer of events, on occasions of danger and distress, will have a natural tendency to strengthen and elevate the character.

"But, to obtain this desirable end, the actors, as well as the events, must be real. Children must not suppose that a scene is *got up for them*, to answer some particular purpose: they must feel the sober assurance that they are treated like reasonable beings, and admitted to the knowledge of the truth, as they are able to understand it."

I now hasten to the conclusion: I have considered the subject in its most extensive bearings, and as spreading over the whole of life, that the youth who has attended his terms at college may not regard his education as '*finished*' but look upon it as then only begun,—as possessing but the elements, and the foundation with and on which he is to rear the future structure of his thoughts, by unremitting self-culture.

Education of every kind must, indeed, be the work, in a great part, of the individual himself who is the subject of it; all else are but adventitious helps which render the task easier or more complete, but can never supercede the one constant requisite—*Self-discipline.* Schools, books, lectures, &c., avail but little where the thinking faculties are not in active operation to ponder and appropriate what is offered to the attention. It was not alone the strong arm of Achilles which enabled him to use his bow, but *self-discipline* that taught him how to bend it.

I have regarded man in his whole nature, physically, intellectually, and morally; and that this is the only safe and profitable way by which we can attain all the best ends of education will not, in this day, be questioned. Yet, before taking leave of my subject, it may not be unprofitable to attempt some further illustration of the fact, if, haply I should succeed in more forcibly impressing upon the mind the necessity of uniformly conducting the education of youth upon the principles of this broad basis. For this purpose I shall find it expedient again to revert to the analogy which exists between the bodily and mental constitution. In doing so, I shall assume as true, the doctrines maintained by phrenologists:—

First, That the mind operates through and by means of the material organs which compose the brain, each particular organ influencing the mind in a particular manner, and producing in it a state called a faculty; that there are two systems or orders of faculties,—those of the intellect, and those of the feelings, the latter including the sentiments and propensities of both.

Secondly, That these organs improve in structure, and increase in size and vigor by use and exercise, each organ as it is stimulated by its appropriate objects, just as the external organs and the limbs of the body are increased and invigorated by the same means—that of use and exercise; those which are left in a state of torpor, or which are but little used, remaining small and weak. There are but few ignorant

of the fact, that, if some of the members of the body get more exercise than others, they become in consequence, proportionably larger, stronger, more capable of endurance, and more active. The arm of the smith, from constant and laborious use, becomes strong and brawny; the tendons enlarge and the muscles swell out beyond their wonted proportions.

If the right arm or the right leg is more used than the left, it becomes stronger and better adapted to the offices which it subserves than its fellow; which is indeed the only cause of the difference we experience when we attempt to do with the one what the other only has been accustomed to perform. If the upper extremities of the body have too much work, and the lower ones too little, these latter will become shrunken and the former unduly enlarged, and vice versa. This takes place in accordance with a physiological law, by which the amount of energy in the entire physical system is distributed in the largest proportions to those parts where there is the greatest demand for it.

The parts not used contribute their share, and hence shrink while the others are enlarging. And thus it is with the organs of the brain, the sensorial power which sustains any faculty, or set of faculties, in a state of great activity, is drawn from the common stock, and those faculties which are suffered to remain inactive are proportionably enfeebled, by an abstraction of that power, until ultimately, if they continue to be unused, they get into a state of torpor from which it is difficult to arouse them.

The cerebral organs as a whole, are affected, and the mind influenced, by the condition of the body.

If from inattention to the natural laws, the physical functions, generally, are deranged—the circulation impeded, the respiration feeble, the nervous system relaxed—those organs will share in the general debility, and imperfectly discharge their functions, owing to a deficiency in the necessary amount of stimulous. The efforts at intellectual labor will consequently be feeble, and undertaken with irksomeness.

But if the entire physical frame is maintained in a sound and vigorous state, by the natural and liberal use of air, exercise, cleanliness, &c., and by temperate living, the muscles firm, the nerves strung, a healthful flow of blood, free play of the lungs, &c., the organs of the brain will possess vital energy, and the mind be free and alert for action on the appropriate objects being presented to it. Hence we see the necessity for physical development, and the maintenance of a sound and healthful state of the body, in order that we may operate successfully even upon the mind. Bodily and mental labor should be alternated. A greater amount of intellectual labor will be accomplished by any one who devotes only half his time to that object, than if he were to devote to it his entire time, in the vain endeavor to accomplish more.

Every organ was created for the use of a necessary faculty, and requires therefore, its appropriate exercise. Occasions of excitement to the lower faculties, or what are termed the propensities, will not

be wanting; nor need they at any time be sought after; they will come of themselves, but too frequently, in this grovelling and self-seeking age, in which sordid interests and sensual gratifications have the ascendency among men, who seek for their 'chief good' in material things. They must be indulged in so far only as the reason and higher sentiments can approve.

The higher faculties, like the rest, have a tendency to spontaneous activity, but for want of a better state of society suggestive of their use, they mostly get insufficient exercise, and their exercise cannot long be neglected without an infringement of the natural laws. The feelings greatly influence the intellectual faculties. They stimulate them into activity, and have the effect to illumine or obscure the understanding according to their intensity or the manner in which they are regulated, or, as the higher or lower propensities are suffered to predominate. Without the feelings, indeed, we should neither have motive nor power of action. "Some of the feelings," says a writer on the subject, "produce this effect to a remarkable degree; and when under this influence, the intellect is carried to a wonderful degree of clearness and intensity. This, however, is not equally the case with all the propensities. When some of the more gross propensities are active, the intellect is proportionably darkened.

"The exciting power of combativeness is familiar to every one. Few are so powerful in argument at any time as when excited by combativeness. The exciting effect of the feelings upon the intellect produces a sort of mental illumination. The more feelings there are simultaneously active, the more intense and concentrated is the light. The third influence of the feelings upon the intellect is, to warp and prejudice its perceptions and judgment. To pursue the figure: sometimes the light of several of the feelings become so intense and unequal, that the object is viewed under deceptive aspects. The several feelings, too, impart their own distinctive character to the intellectual perceptions and judgments.

"Reverence exerts a grave and magnifying influence. Cautiousness casts forth sombre shades. Hope puts on the high lights.

"Ideality beautifies, and marvellousness exerts a creative influence, finishing up the distant and obscure. As different feelings exert different *degrees* of energy, and *kinds* of influence, at various times and under various circumstances, the mental states are constantly changing.

"Hence the perpetual succession of thoughts, day-dreams, and reveries."

According to the above doctrines, the *feelings* are intimately concerned in the decisions and judgments formed by the intellect, and, therefore, aid or impede our enquiries in the search after truth, according to the nature of those which predominate at the time. Hence we learn that those intellects which are, in themselves, the most powerful, do not, therefore, always see the clearest, or soonest arrive at the truth. The best minds then, for all better purposes of life and happiness, are those which are the best regulated; or, in other words, where *all* the faculties get their due and appropriate exercise.

In this view the intellectual faculties become in a manner the *instruments* of the simultaneous, or successively active feelings.

If the moral sentiments are not predominant, which it is their natural tendency to be, and the lower or animal propensities are unduly indulged, the individual thus circumstanced, will become incapable of those exalted or refined enjoyments which constitute the chief happiness of life, and make existence desirable. He will experience such only as are connected with the low and groveling pursuits in which he will inevitably be engaged. Those propensities, and the habits which grow out of their indulgence, will acquire strength, and obtain over him more and more power; the moral faculties, but little exercised, will continue to offer a feebler and more hopeless resistance to their sway over his conduct, until he finally gives himself up to the gratification of mere animal desires or sordid interests, and loses all relish for the more exquisite and lasting enjoyments which attend upon virtuous feelings and virtuous conduct.

A few more brief observations will now close my labors—for the present time at least—on this interesting subject. It has not been without much thought and care that I have written the various articles now before the public, and which compose what I may be permitted to call a treatise on education, imperfect, indeed, for numerous details, necessary to a complete view of the subject, have been omitted, that I might bring what I had to say within some reasonable limits. I have, however, as I believe, left out of consideration no important *principle*, and if, in what I have done and attempted, I can be assured that I have contributed in the smallest degree to the advancement and better appreciation of that most important of all sciences, I shall be amply rewarded for my pains. And, whether or not, I have shed any new light on the subject,—a thing which I have not hoped for—if I can but be persuaded that I have been instrumental in further diffusing that which had already been struck out by superior minds, I shall be equally satisfied. I cannot, however, close my remarks without a final word of exhortation to the friends of education, I would invoke them wherever found, to come forward with their best efforts and aid in procuring for the rising generation improved methods of instruction, to be introduced into our schools, every-where,—to do what they can, in every instance, to bring into discredit, and abolish the present irrational system of mere mechanical routine which only enfeebles the mind, gives a distaste for learning, and produces a torpor of the faculties which renders them permanently incapable of being afterwards excited to vigorous action.

Let competent teachers be sought after at any cost; and these should be men of the best minds and most cultivated intellects. Let those philanthropists who are seeking in various ways to ameliorate society, and divert it from the low and frivolous pursuits which at present characterise it, direct their efforts to the one object of procuring for youth a suitable intellectual and moral training, and they will lay the foundation for a better state of things than we have yet had it in our power to boast of. They can accomplish their objects

in this way and in no other; for, in my opinion, it is vain and futile to look for any amelioration in society, until *society is better educated.* Let us then not merely *talk* about education—*declaim, descant, harangue,*—but wherever we see any thing effective to be done, and which active efforts can accomplish, let us not falter or hesitate, but put our shoulders to the wheel, apply ourselves to the task, and forthwith do it.

ART. V.—PACIFIC RAILWAY.

To the Editors of the Western Journal:

The distinguishing feature in the plan of Mr. Degrand, for this inland line, which is destined ere long, to span the continent, and bind together the extremities of the Union, is this: it seeks the medium of a charter for its accomplishment, and combines the energy, experience and frugality of individuals with the powerful credit of the government, a union, which once effected, must give success to the enterprise.

It must be conceded, at the outset, that such a charter, controlled by men of talent, and fortified by the credit of the Union, under an irrevocable contract, would be the most effectual mode of achieving this enterprise. Such companies are by no means novelties, either at the east or west. The Michigan Central Railway Co. have within two years united Lake Erie to Michigan by an enduring work, rapidly achieved and admirably executed with a rail, engines, cars, piers, stations, and capacity for draft and speed not surpassed in the new world. They did this too, after the original enterprise, languishing in the hands of the state, half famished and half built, had lingered out a miserable and sickly existence. The Western Railway Co. of Massachusetts, with a small private capital, and a large state credit, was commenced amid the gloom and depression of 1837, and opened in 1841, across two ranges of mountains, repectively 1000 and 1400 feet high at the lowest points of depression, across great rivers and and through a sterile region to unite Clinton's canal with the tidewater of Massachusetts bay. An army of men were encamped on this work, hundreds of thousands of yards of solid rock were blasted by relays working night and day. Steam shovels and drills were applied, and the work went onward through every difficulty, vanquishing every obstacle, and now, as I write, it pays its interests and sinking fund, divides eight per cent, is transporting weekly, for one article,

40,000 barrels of flour at rates as low as those of the State canal, but at fourfold speed, and has given a spur to Boston which still impels her onward. The Baltimore and Ohio Railway is another striking instance. Long depressed by the financial difficulties of Maryland, it is now, with the bonds of that State, under the guidance of a Board of Directors, springing at a single bound across the ridges of the Alleghany, from the Potomac to the Ohio.

There are some who consider the Pacific Railway a visionary scheme, too great for the present day, beyond the means of the country. But a Bostonian, who has witnessed for the last ten years what associations have effected in New England, and the progress of New England in consequence, and partaken in the movement has no such misgivings. Massachusetts, with her rock-bound shores, with no native staples but granite and ice, is alone nearly equal to the enterprise, but she requires for two years to come a large part of her annual accumulation for commerce and shipping.

Within the last four years the region of which Boston is the centre, has invested over sixty millions of dollars in public enterprises and loans to the United States. In the Vermont Railways, the Cheshire, Ogdensburg, Vermont and Canada lines, the Michigan Central, the Wilmington, Reading and Mad River Railways. In factory cites at Lowell, Lawrence, York, Manchester and Springfield. An aqueduct which alone costs five millions, in numerous small branch lines of railway, and the enlargement of all the great lines out of Boston. A close estimate of these expenditures is in my possession and exceeds the sixty millions. This has made a heavy drain on our market, has given a temporary check to building and trade, but a few months more will complete the last payments, and the city be placed in the fruition of the great objects it has pursued.

If a single city and district can in four years accomplish so much by associated companies, can an association fail to succeed, backed by the credit of the whole Union, and embarked in an enterprise in which the feelings and interests of the whole Union are enlisted; an enterprise which requires little more than the amount which a portion of one of the smallest States had raised on her own bottom, and equipped at the same time a fleet to colonize California?

Again, let me ask, can a nation which has within three years and almost without feeling it, sunk a hundred millions in a foreign war—an unproductive investment—fail to carry through an undertaking which must employ at home thousands of its citizens, and diffuse millions among all the arteries and veins of commerce?

For three-fifths of the entire distance, viz: from the mouth of the Kanzas to the Salt Lake, nature seems to have anticipated art in grading the route for the rail. In place of the granite rocks of the bay state, requiring cuts of seventy feet depth and grades of eighty feet; where stone bridges 70 feet high spring across deep chasms and ravines, on a route almost impassible to the woodsman and hunter in a state of nature, we find a natural wagon road of at least 1200 miles in length, rising on an average seven feet to the mile, with pier bridges and shallow streams and requiring little more than a bed to be thrown up for the reception of the track. Let such a line be cut into

divisions of one hundred miles each, with an engineer and four assistant engineers for each division. Let each division be subdivided into sections, provide the funds, establish a station, a barrack and a few houses and farms on each section, and what is there to prevent the opening of such a line in two or three years, at a reasonable cost? As respects the more difficult portions between the Salt Lake and the sources of the Sacramento, and between St. Louis and Independence, more time will of course be required; but meanwhile steamers may reach the mouth of the Kanzas, and the wagon road be reduced to a few hundred miles, and the whole work be strung with men and progressing at the same moment.

Give it, however, to a company, and all this may be effected with dispatch and before the election of another President.

But, it is suggested there are objections, to a company. It cannot be that a company will not effect the work as well, as promptly, and as cheaply as Government, for those who advocate the action of government, would intrust the line when finished to the management of a company. As France has confided the lines which she located and begun to associations, and as Belgium, after completing several lines, now entrusts her new works to private companies. But doubts are expressed whether a company to be created by government be constitutional. Is not the answer to this perfectly obvious and conclusive? If Congress have power to build the Pacific railway, can not they *do it* in any way they chose, either by a *company* or by *commissioners*? If they have a right to act, may they not select the mode and form of action? And is not the mode clearly an incident of the power? The entire line from the mouth of the Kanzas to the Bay of San Francisco, is in a territory of the United States? How has Congress under our constitution governed territories? Has it not in the District of Columbia, year after year, established company after company? Has it not by its territorial governments, done the same, again and again, in Florida and other territories? Has it not taken stock or lent its credit to the Chesapeake, and Ohio, and Louisville canals, and other companies, are the usage under the constitution and the practical constructing of the same for many years to go for nothing? If the work as a post route, a military road, a work of national defence, a means like a survey, of giving value to the public lands and bringing them to market be constitutional, why cannot it be constructed, in any way Congress may direct? If doubts exist in Missouri, as to the portion in Missouri, for the Boston committee do not entertain them, let the act provide that such portion shall not be built until the State of Missouri confirm the charter, and who can question the concurrence of the State or the validity of the act within her limits? and let the admission of States beyond her be subject to a reservation for the railway, if Missouri does not desire the railway, Iowa will be less exclusive.

But it is suggested the company will make a profit, unquestionably that hope as well as patriotism will animate those who embark millions in the wilderness, and give time and talent to guaranty the government against loss, and shonld that inducement be witheld, is not the laborer worthy of his hire? and would any one regret that those who achieve so noble an undertaking should reap their reward?

They can receive nothing until the road is done, and then it will be pledged for every dollar of the loan.

Is it not true, that a company building and running the line may carry passengers and freight at low rates and realize large profits, with benefit to the public, from the very *waste* that may be incurred by government? Let the government do as Massachusetts has done, let it restrict the company to low rates, for instance, to two cents per ton a mile on through freight, except specie, cloths and the like, and to two cents per mile, on through passengers. Let it provide that all sums realized from the land be applied to the road, the interest, or the reduction of the debt, and reserve a future power to reduce the toll, with the growth of the traffic, as is done in New England. With such safeguards, and a large representation of the country in the direction, what has the country to fear? The nation takes directly as a stockholder, one-third of the profit, and one-third of the granted land, and indirectly an immense profit, in the promotion of its commerce, the development of its resources, the transit of its mails, and the defence and close embrace of its remote, yet most valuable possessions. Your useful and spirited journal, established in a region less familiar with railway companies than our own, prefers the direct action of the government by commissioners to the intervention of a company; and deprecates the action of visionary or speculative men. When railways were first proposed in Massachusetts, and Mr. Degrand, with his keen vision foreseeing their future success, assembled his friends to plan a highway to Albany, and ventured to picture an iron horse threading our vallies and running his fiery course across our mountains, it was customary to point out both him and his younger associates as enthusiasts and visionaries, but the solid and substantial results so far exceed his predictions, the actual realization so far surpasses his pictures, that of late he has enjoyed with us more of the reputation of a philosopher and reliable oracle; and such we may anticipate will be his fortune when the Pacific railway is completed.

And let me ask, is entire justice done to his estimates as reviewed in the last number of your journal. When you take ten millions as his estimate of passenger income, would it not be proper to deduct from it one half at least for expenses before applying the net-result to the reduction of principle, and would the residue more than suffice for deterioration, interest and dividend? Again, if the South Shore railway amid a dense population has increased the value of land $50 per acre for two miles each side of the line, must it be inferred that the Pacific line is at once to convert the land of our great desert and prairie, ten miles wide upon one side of the railway from nothing, its present value, into one hundred millions, or $8·33 per acre. Mr. Degrand neither predicts or anticipates that this narrow strip is at once to be coined into gold, merely because it lies in the way to San Francisco, or to produce by the galvanic battery of a railway more money than the entire sales of public lands in all the States and territories since the adoption of the constitution. Is so summary a *reduction ad absurdum* warranted by his premises? and should we lose sight of the fact that the government will derive equal profit whatever it may be, from the strip it reserves on the opposite side of the railway?

How is it with your fertile and long settled State of Missouri, does not the last number of your 'Journal' demonstrate that with all the advantages of its two highways, the Missouri and Mississippi, two-thirds of it is not worth to-day $1 per acre. Again, it was suggested, by Mr. Degrand while arguing the feasibility of a railway, that it will be used annually by 150,000 persons moving west, and 50,000 moving east; and that such passengers will save in time and expense by the railway, $67,750,000 annually, valuing time at $1 a $3,50 per day only. From the magnitude of this result, amounting in 50 years to $3,387,500,000, it is argued, that the scheme of Mr. Degrand is somewhat chimerical. The amounts, doubtless, at first seem large, perhaps astounding; but such have been the results of all great railways; and it must not be forgotten, that the estimate runs deep into the future. Does it rest on vapor or adamant? And first, what is the present emigration to California? The Boston Shipping List, of October, 1849, contains the following summary.

"The total number of vessels that have left the United States for "California, from the commencement of the excitement, is as follows: "Ships, 189; barques, 175; brigs, 119; schooners, 83; steamers, 7; "total 573. Of the above, there have arrived at California, up to "the latest dates, as follows:—Ships, 55; barques, 45; brigs, 35; "schooners, 28; steamers, 4; total 167. The number that have "sailed the past month, is as follows:—Ships, 18; barques, 14; "brigs, 18; schooners, 15; total 65." According to the same authority, there are now up for California, "47 ships, 21 barques, "22 brigs, 9 schooners, and 2 steamers, total 101 vessels; of which "12 ships, 6 barques, 9 brigs, 2 schooners, and 1 steamer, are up at "Boston, in all 30 vessels. At New York only 27 vessels; Philadel-"phia 6; Baltimore 4; New Orleans 8; Newburyport 6; New "Bedford 6; Bangor 3; other places 11."

It thus appears that in little more than ten months, six hundred and seventy-four vessels, of an average capacity of more than three hundred tons, will have sailed for California; at least two-fifths of which, or nearly three hundred sail have been fitted out by Massachusetts. In these, more than twenty thousand men, in the prime of life, active and efficient seamen, artizans and traders, have embarked. Besides these, many thousands have passed the Isthmus, a caravan of thirty thousand, or more, has crossed the plains, and many thousands of our seamen have gone from foreign ports. The aggregate of a single year must exceed 70,000 souls. The ordinary effect of a railway, is to treble travel, when it supercedes a direct route, much more when it supplants a tedious and circuitous sea-voyage. Is it then reasonable to anticipate 100,000 people to go west, and 50,000 to come eastward annually? Does not the annual emigration to the Union, exceed 270,000, and is not our annual increase about 1,000,000; and do not our statistics clearly show, that, within 50 years, during the life of some who read your journal, our population will exceed one hundred million, and cover the entire area between the two oceans, even if the British provinces are not added to our

system? Will not California absorb one-tenth of our increase, and if 150,000 travel on the routes proposed, would they not save the aggregate upon what it would cost them in time and money, had they ventured to travel without a railway? The aggregate is large, but let us, before we shrink from it, glance at the accumulating means of our country. In 1840, the valuation of Massachusetts, with 740,000 people, was three hundred millions of dollars. The returns of Boston, Charlestown, Roxbury, Lowell, Lawrence, Cambridge, and other cities, indicate for next year, for the State, a population of 950,000; and a valuation of five hundred millions. Massachusetts contains but one twenty-third part of the Nation, and were the residue of the Union as rich, we should exhibit, in 1850, an aggregate wealth of 11,500 millions. But, assume it at 6000 millions only, and to double but once in twenty years, and the result, fifty years hence, of thirty-six thousand millions of national wealth, will certainly avert the entire ruin, which, it is argued awaits the nation, if the railway be not constructed. When we look at the probable results, the amount of Mr. Degrand's saving is but a fraction—less than a tenth of the resources of the country—and sinks, large as it is, into comparative insignificance. We have a great future before us, and when we venture to figure the effects of fifty years' progress, the results of mathematical deductions are almost too astounding to be credited, and the man of facts, of algebra, and of reflection, must not be surprised if even the most intelligent of his fellow-laborers, pursuing a different path, style him a visionary. Thus much in defence of Mr. Degrand. As one of the Boston Committee, I am happy even if we differ somewhat in details, to unite with you in promoting this great national enterprise.

You argue, it is important to Boston, still more is it to the West. With it, the streams of Oriental and European trade must meet in the great central cities of our present west, and create there the future emporium of our inland commerce.

I have the honor to be,
Very respectfully, yours,
E. H. DERBY.

Boston, November 9, 1849.

Should any of our readers question the fairness of the article in the October number of the 'Western Journal,' of which Mr. Derby complains, we respectfully invite them to give it a careful perusal, and judge for themselves, whether we were warranted in our remarks in respect to the address of the Boston Committee.

Did we feel a consciousness of having done the slightest injustice to the author of that address—so far from attempting to defend ourselves—it would give us pleasure to make attonement; for this, would not only save the labor of making a defence, but afford the pleasing reflections which are always consequent to the discharge of social duties.

The Boston project is based on assumptions, which are presented in the address as incontrovertable facts; and some of these are so

remarkable that they seem to challenge investigation. We did not attempt to analize the grounds of these assumptions, but drew inferences from them as we found them stated by the author. One of the arguments used to show the importance and necessity of constructing the road in the shortest time possible, is based on the assumption, that 150,000 persons will go to California, annually, by the way of Cape Horn and the Straits of Magellen, and fifty thousand return; and he estimates the value of the time occupied in these voyages, at $3,50 per diem, for 150,000, and $1 per diem for 50,000, amounting in all to $57,500,000. And the entire charge, including cost of passage, is set down at $82,500,000: and, extending this calculation to fifty years, he asserts, as we understand him, that the country will loose $3,387,500,000 unless the Boston plan is adopted. For he affirms, most positively, that if the project now before Congress should be adopted, the road will not be completed in less than fifty years.

Will any one believe that 150,000 persons will ever go to California, by the way of Cape Horn and the Straits of Magellen, in one year? or, if they should, that their time would be worth $3,50 per diem? But, admitting that this number should go by that route, and none should travel by any other, California must produce gold, or some other commodity, to the value of $87,500,000 per annum to pay the cost of travel to and from the country!! We might enumerate many other absurdities involved in these assumptions, but we have neither time nor inclination to pursue this branch of the subject. Indeed, we should not have adverted to it at all, but, that, it seems to be relied on, as one of the capital arguments in favor of the Boston plan.

The committee asks for a charter, without suggesting the slightest restriction in respect to the rate of tolls or transportion, and they ask also, for a strip of land ten miles wide. It was natural to infer that they would aim to popularize their plan, by indicating the restrictions to which they were willing to submit, and we, having no right to modify their proposition, treated it according to its just interpretation. Now, if a corporation would make the road on their own money, we could not consent that it should have an unlimited control over the transportation of the commerce between the valley of the Mississippi and the Pacific Ocean: nor, that it should be invested with the fee of 12,000,000 acres of land.

These objections, however, are in a measure, removed by the modifications and restraints suggested by Mr. Derby; and we admit, that were there no Constitutional objections, a corporation might be so far restricted, as to remove, perhaps, entirely, our objections to this plan of carrying on the work. But, there would yet remain another objection to the Boston plan, which we deem important. It is admitted, we believe, on all hands, that the road can only be constructed by the aid of means to be appropriated by the General Government; and it is our decided and uncompromising opinion, that what sum soever may thus be appropriated should be dedicated to the nation; and, that neither interest nor dividends should ever be required for its use. But, that all tolls, or money received for transportation of persons and property should be based on the cost of repairing, and, a fair remuneration for the capital, labor and skill employed in carrying on

the business of the road. For, if the money invested in the construction of the work, be required to pay dividends, the cost of transportation must be so high that, articles of great weight in proportion to their value will be excluded.

We have no expectation that a route can be found from the Mississippi river to San Francisco that will be less than 2400 miles in length; and freight at the rate of two cents per ton per mile, counting the ton at 2,000 lbs, would amount to about 5,00 per barrel for flour, and about 1,40 per bushel for wheat. It is evident that these rates would exclude much the larger portion of the products of the Mississippi valley from passing over this route to the Pacific; and deprive this region of the benefits that might be expected from an exchange of many of its agricultural and mineral productions.

None more than we admire the enterprise, the foresight, and indomitable perseverance of the people of New England; for they have done more perhaps, in the last fifty years, to advance the cause of civilization than have the people of any other country: and it is natural that success in their undertakings should inspire them with confidence in their ability to achieve whatsoever they design. On the other hand, failure and disappointment in carrying out schemes of improvement in the west, have made western men cautious and distrustful. Having been mislead by the calculations of enthusiastic projectors, they place but little confidence in arithmetic; and, indeed, the belief prevails in the west that figures are not always to be trusted. Hence, one who aims to secure the confidence of the people of this region, in respect to any subject envolving the investment of money, must avoid extravagant calculations, or he will be set down as a visionary speculator unsafe to be trusted.

We desire that our Boston friends should not misconceive our motives in objecting to their plan. None who have read the Western Journal, from its commencement, can doubt the absorbing and profound interest which we feel in establishing a railway communication between this valley and the Pacific ocean: and none, more than we, desire a speedy accomplishment of the enterprise, but, we also desire, that when completed, there shall be no private interest involved in it that may, by any possibility, detract from its usefulness as a national work. We have offered no scheme of our own—we have no ambition to be considered projectors—but we could not, consistently, with the high ground which we have assumed as journalists, publish a scheme that conflicted with our own opinions without comment.

In concluding, we beg to assure our Boston friends, that we feel flattered by their notice of our humble labors; and although we have deemed it our duty to make known our objections to their railway project, yet, we sincerely trust that we may, in other respects, be useful to each other. We desire to see New England enterprise and capital transferred to the west, and shall labor with fidelity to make known the extent and true condition of its resources, for the benefit of every part of our common country.

Heretofore there has not been a just reciprocity in the exchange of information and opinions between the east and the west; for while the inhabitants of the latter have habitually looked to those of the

former for intelligence, they, of the east, have apparently regarded our opinions as a matter of no importance to themselves.

This was natural in the early settlement of the country: but, the mighty power that is growing up in the west is beginning to produce a change in the former relations of the two regions. The tide of emigration that continually flows into this great valley, and which never ebbs, brings with it intelligence, enterprise, capital, and labor: these elements are beginning to form combinations, upon the basis of our vast agricultural and mineral resources; and the time is near, if not already arrived, when the people of other countries will find it to be their interest to look to this region, not for facts only, but, to study the extent and true nature of that power, which, under Providence, is designed, as we believe, to direct and control the destinies of the inhabitants of this continent. We, of the west, owe much to our eastern brethren: we have been their pupils, and having profited by their precepts, should be grateful for their instruction; but, we are growing up to manhood, and if they desire to preserve their former influence, they must study the developments of our character while it is being unfolded, for these developments conforming to the extent and great resources of the country, can justly be appreciated, by those only who comprehend our true condition.

NOTES ON THE SEASONS OF 1849.

Winter.—Cold and disagreeable—much sleet and frequent light snows. Much floating ice in the Mississippi, but not enough to prevent the crossing of the ferry boat, at St. Louis, for any one day during the season.

Spring.—Vegetation made its appearance about the 1st of April, which may be regarded as the average time in this climate, but there was cold weather about the middle of the month. On the 14th there was frost and some ice, but vegetation and fruit were not thoroughly killed.* The season was marked by a good deal of rain, and cloudy weather.

Summer.—June and July were rainy and humid. Wind generally from east to south—temperature rather below that of average seasons. August was a fine summer month for this region.

Autumn.—Season most beautiful and pleasant throughout. There were several light frosts in October, but vegetation was not thoroughly killed until about the 26th November. About the middle of November we saw Pulnia Christie and other summer plants, in the neigborhood of this city, which had not been touched by frost, and there was no frost that could have injured them from that time until about the 26th of the month. The first snow that covered the ground this season, fell on the 7th December; it lay perhaps from two to three inches in depth, but the weather became warm and it commenced melting immediately.

In Minesota, the first killing frost, reported for this season, happened on the first October.

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* The cold spell that happened here about the middle of April, extended to the Gulf of Mexico—the crops, throughout the southern States, were more or less affected by this frost. We learn from an exchange paper, that on the 15th of April, the snow covered the houses in Columbia, S. C.

COMMERCIAL STATISTICS.

STATEMENT *of Brown Sugar imported into the United States, in the respective years ending on the 30th June,* 1847 *and* 1848, *designating the quantity and value imported from each country; carefully collected and made up from the annual reports of the Secretary of the Treasury of the United States.*

WHENCE IMPORTED.	1846-7.		1847-8.	
	Pounds. Quantity.	*Dollars. Value.*	*Pounds. Quantity.*	*Dollars. Value.*
Swedish West Indies, -			13,020	570
Danish West Indies,	6,678,466	36,994	2,821,950	111,907
British West Indies,	738,398	30,397	1,258,222	35,806
British A. Colonies,	1,005,839	41,397	825,614	40,454
France on the Med'n.,	194	15		
French West Indies, -	7,034	312	586	28
Manilla & Phil. Islands,	3,507,910	128,727	12,515,858	398,643
Cuba, - -	169,274,024	6,809,311	174,979,362	6,442,661
Other Spanish W. I.	37,566,381	1,609,262	47,778,973	1,620,879
New Grenada, -	8,449	548	58,595	2,231
Brazil, - -	6,896,447	298,777	6,003,609	225,844
China, - -	240	11	352,032	20,920
Holland, - -	5,150	356		
Dutch West Indies, -	100,274	6,534	513,977	17,742
Dutch Guiana, - -	179	5	32,455	659
British Honduras,	175,378	7,896		
British Guiana, -	180	10	1,088	44
French Guiana, -	28,251	1,065	9,191	343
Hayti, - -	200	10	357,091	12,856
Mexico, -	142,183	7,201		
Venezula, - -	351,183	20,044	236,528	11,241
Asia, generally, -	134,585	4,640	344	20
Sandwich Islands, -	216	9		
Dutch East Indies,			314,505	12,414
England, - -			633	24
Peru, - - -			227,084	8,353
South Seas & P. Ocean,			400	15
Total, -	226,683,261	9,344,721	248,201,117	8,963,654
For'n Sugar exported,	5,756,250	291,780	11,614,129	596,465
Total retained for consumption, -	220,927,011	9,052,941	236,586,988	8,367,189

IMPORTS *of White Clayed or Powdered Sugar, into the United States, for the years ending 30th June,* 1847 *and* 1848.

WHENCE IMPORTED.	1846-7.		1847-8.	
	Quantity. Pounds.	*Value. Dollars.*	*Quantity. Pounds.*	*Value. Dollars.*
Cuba, - -	8,764,675	446,876	6,034,310	309,399
Brazil, - -	289,484	11,619	684,048	33,373
All other countries,	141,947	7,886	88,650	4,280
Total Imports,	9,196,106	466,372	6,807,008	347,052
Exported, - -	2,452,780	161,799	1,063,161	77,938
Total retained for consumption -	6,743,326	304,573	5,743,347	269,114

IMPORTS *of Loaf and other Refined Sugar, for the years ending 30th June,* 1847 *and* 1848.

WHENCE IMPORTED.	1846-7.		1847-8.	
	Quantity. Pounds.	*Value. Dollars.*	*Quantity. Pounds.*	*Value. Dollars.*
Danish W. I. Islands,	638,866	33,766		
Holland, - -	380,992	27,433	1,805,749	146,563
Belgium, - -	35,355	2,401	258,779	18,509
All other countries,	36,264	2,519	57,100	4,066
Total Imports, -	1,089,477	66,119	2,121,628	169,111
Exported, -	185,878	17,284	139,220	30,191
Total retained for consumption, - -	903,599	48,835	1,982,408	138,920

The following is a statement of the production and consumption of sugar for four year past, and estimate for the present year, together with the stock on the 31st of March of each year (in tons):

Extracted from De Bow's Commercial Review.

Growth.	1845.	1846.	1847.	1848.	1849.
British West Indies, -	142,000	107,000	159,000	145,000	140,000
Mauritius, - -	36,000	43,000	65,000	57,000	45,000
Bengal, - - -	67,000	68,000	70,000	60,000	60,000
French Colonies. - -	102,000	80,000	80,000	60,000	40,000
Dutch and Danish Colonies	25,000	20,000	25,000	20,000	19,000
Cuba and Porto Rico, -	115,000	230,000	310,000	290,000	210,000
Java, - - - - -	89,000	86,000	81,000	79,000	75,000
Siam and Manilla, -	15,000	26,000	30,000	20,000	20,000
Brazil, - - - -	93,000	75,000	112,000	120,000	80,000
Louisiana, - - -	95,000	90,000	65,000	120,000	90,000
Beet Root, - - - -	70,000	80,000	90,000	90,000	70,000
Total growth, - -	849,000	905,000	1,087,000	1,061,000	845,000
Stock, March 31, - -	122,000	121,000	87,000	143,000	130,000
Total supplies, - -	971,000	1,026,000	1,174,000	1,204,000	975,000
Stock succeed'g Mar. 31,	121,000	87,000	143,000	130,000	
Total consumption, -	850,000	939,000	1,031,000	1,074,000	

Consumption in 1848, - - - - - -	1,074,000
For Consumption in 1849, - - - - - -	975,000
Deficiency, - - - - - - -	99,000

The low price diminishes beet root cultivation. Emancipation in the Danish and French colonies produce the same result.

STATEMENT *showing the quantity and value of coffee imported into the United States from each country in the years ending on 30th June* 1847 *and* 1848, *carefully collected and made up from the reports of the Secretary of the Treasury of the United States.*

WHENCE IMPORTED.	1846-7.		1847-8.	
	Quantity. Pounds.	*Value. Dollars.*	*Quantity. Pounds.*	*Value. Dollars.*
Danish West Indies,	485,350	17,249	56,702	2,083
Holland, - -	3,943,579	322,788	2,381,773	199,352
Dutch West Indies,			2,001	100
Dutch East Indies,	13,875,766	681,404	3,037,373	155,689
Dutch Guiana - -	21,525	2,258		
Manilla & Phil. Islands,	695,612	34,112	25,484	1,792
Cuba, - -	6,773,479	421,649	2,258,710	139,543
Other Span. W. I. Isl.	303,674	22,535	348,373	25,202
Turkey, - -	91,500	10,107		
Hayti, - -	19,085,277	877,163	16,990,976	1,031,459

Central Republic of America,	100	8		
Venezuela, -	12,806,942	447,896	12,720,613	562,576
Brazil, - -	94,916,629	5,673,680	110,927,284	5,969,993
China, - -	352,000	22,018		
Asia generally, -	152,850	16,337	167,400	15,515
Africa generally, -	1,104,428	22,864*	57,567	5,316
British East Indies,	1,016,710	62 223	124	6
British West Indies,	35,461	2,251	710,331	39,385
France on the Atlantic,	9,805	550		
French west Indies, -	2.364	186		
Mexico, - -	241,742	13,785		
New Grenada, - -	2,344	196	328,971	20,440
Chili, - -	779,437	51,699	37,136	5,248
Swedish West Indies,			510	38
Cisplatine Republic,			507,810	25,392
Total (free of duty,)	156,716,575	9,102,772	150,559,138	8,199,129
Imported from other countries than the place of production.	91,547	7,119	872,987	50,868
	156,808,122	9,109,891	151,432,125	8,249,997
Quantity exported,	6,380,283	449,743	7,048,671	468,600
Total retained for consumption, -	150,427,839	8,660,148	144,383,454	7,781,397

STATEMENT *of the quantity and value of Teas, imported into the United States, in the years ending on the 30th June, 1847 and 1848, made up from the Reports of the Secretary of the Treasury of the U. S.*

WHENCE IMPORTED.	1846-7. Quantity. Pounds.	1846-7. Value. Dollars.	1847-8. Quantity. Pounds.	1847-8. Value. Dollars.
China, - -	17,296,124	4,278,448	23,597,702	6,217,111
Manilla & Philippine Islands,	60	13		
Imported from other countries than the place of production,	37,078	5,993	65,267	8,368
Total Imports,	17,333,262	4,284 456	23,662,969	6,225,479
Exported, -	3,074,270	1,078,407	2,883,531	925,102
Retained for consumption,	14,258,992	3,206,049	20,779,438	5,300,377

The following tables, exhibiting the value of the Exports from Charleston, S. C., from the year 1820 to 1847 inclusive; and the amount of duties collected from the year 1834 to 1847, are transfered with the remarks accompanying them, from De Bow's Commercial Review.

We infer that the table of exports includes the cotton, and other produce grown in Georgia, and transported on the Railroad from Hamburg to Charleston, and in this view of the subject, before we

*There is probably a mistake in these figures.—EDITORS.

can form a just estimate of the increase or decrease in the value of the products of South Carolina annually exported, we should know how much has been added to the exports of Charleston, by the construction of the railroad. We should be pleased to see a statement of the annual exports from Augusta to Charleston. Will some of our Southern friends furnish us with these facts?

EXPORTED FROM CHARLESTON IN

1820	$9,690,539	1829	$8,134,676	1838	$11,017,291
1821	6,867,515	1830	7,580,821	1839	10,318,822
1822	7,136,366	1831	6,528,605	1840	8,990,048
1823	6,671,993	1832	7,685,833	1841	8,598,257
1824	7,833,713	1833	8,337,512	1842	8,091,542
1825	10,876,475	1834	11,119,565	1843	7,010,631
1826	7,468,966	1835	11,224,298	1844	8,578,515
1827	8,189,496	1836	13,432,757	1845	8,366,250
1828	6,508,570	1837	11,138,992	1846	8,284,405
				1847	7,783,038

The value of the exports from 1840 to 1847, inclusive, has been furnished by the Hon W. J. Grayson; the information for the previous years is extracted from De Bow's Commercial Review.

DUTIES RECEIVED IN CHARLESTON FOR THE YEARS

1834	$467,000		1842	$300,000
1835	464,000		1843	340,000
1836	701,000	—Year of speculation and	1844	490,000
1837	474,000	high prices.	1845	390,000
1838	590,000		1846	280,000
1839	640,000	—Year of high prices.	1847	387,000

The years 1840 and 1841, remarks the Hon. W. J. Grayson (Collector), are omitted, the record in the office being incomplete. The first and second quarters of 1840 amounted to $192,000, and the last quarter of 1841 to $116,000.

We find in the *Commercial Review*, for December, 1849, the following statement of the growth, exports and consumption of Cotton, in the United States, for a series of years. The article is credited to the "New York Commercial List," and having been adopted by the Editor of the "Southern Review," may be regarded as sufficiently correct for practical purposes. We are not in possession of facts which enable us to examine the correctness of this statement. It certainly exhibits some remarkable features in cotton growing: for while it shows an enormous increase in the old States on the Atlantic, there is a decided falling off in the exports at New Orleans. We know that the cotton crop is greatly influenced by the character of the seasons, but this is the most remarkable instance that we remember. It is also remarkable that after all that has been said of the great emigration to Texas, there should be so little cotton grown in the southern part State.

COTTON CROP OF THE UNITED STATES, 1849.

STATEMENT AND TOTAL AMOUNT FOR THE YEAR ENDING AUGUST 31, 1849.

	Bales.	*Total*	1848.
NEW ORLEANS—Export—Foreign, 961,492; coastwise, 205,811; stock 1st September, 1849, 15,480 - - - - - - -	1,182,783		
Deduct—Stock 1st September, 1848, 37,401; received from Mobile, 35,164; Florida, 5,065; Texas, 11,356 - - - -	88,986		
		1,093,797	1,190,733

MOBILE—Export—Foreign, 396,341; coastwise, 141,090; burnt at Mobile, 400; stock 1st September, 1849, 5,046 - - -	542,877		
Deduct—Stock 1st September, 1848, 23,584 received from New Orleans, 587 - -	24,171		
		518,706	436,336
FLORIDA—Export—Foreign, 79,739; coastwise, 120,339; stock 1st Sept. 1849, 615 -	200,693		
Deduct—Stock 1st September, 1848 - -	507		
		200,186	153,776
TEXAS—Export—Foreign, 2,495; coastwise, 36,627; stock 1st September, 1849, 452 -	39,574		
Deduct—Stock 1st September, 1848 - -	747		
		38,827	39,742
GEORGIA—Export from Savannah—Foreign Uplands, 207,403; Sea islands, 10,622; coastwise—Uplands, 186,853; Sea islands, 938; from Darien—New York, none; stock in Savannah 1st September, 1849, 11,500; stock in Augusta and Hamburg 1st September, 1849, 13,819 - - - - - - -	430,775		
Deduct—Stock in Savannah and Augusta 1st September, 1848, 36,603; received from Florida, 2,800 - - - - - -	39,403		
		391,372	254,825
SOUTH CAROLINA—Export from Charleston, Foreign—Uplands, 280,671; Sea islands, 13,111; coastwise—Uplands, 163,356; Sea islands, 813; burnt at Charleston, 150; from Georgetown—New York and Boston, 3,285; stock in Charleston 1st Sep. 1849, 23,806	490,192		
Deduct—Stock in Charleston 1st Sep. 1848, 14,985; received from Savannah 17,990 -	32,075		
		458,117	261,752
NORTH CAROLINA—Export—Coastwise -		10,041	1,518
VIRGINIA—Export—Foreign, 1,406; coastwise and manufactured (taken from the ports), 14,838; stock 1st Sep. 1849, 1,750 -	17,994		
Deduct—Stock 1st September, 1848 - -	444		
		17,550	8,952
Total crop of the United States, - -		2,728,596	2,347,634
Total crop of 1849, as above, - - - - - - - -bales			2,728 596
Crop of last year, - - - - - - - - - -			2,347,634
Crop of the year before, - - - - - - - - -			1,778,651
Increase over last year, - - - - - - - -bales			380,962
Increase over year before, - - - - - - - -			949,945

EXPORTS TO FOREIGN PORTS FROM SEPTEMBER 1, 1848, TO AUGUST 31, 1849.

From	*To G. Britain.*	*To France.*	*To N. of Eu'p.*	*O'er F'n p'ts.*	*Total.*
New Orleans, bales	615,018	154,647	61,062	100,765	961,492
Mobile, - -	290,383	61,597	16,822	27,539	396,341
Florida, - -	62,734	5,721	6,836	4,448	79,739
Texas, - - -		750	1,745		2,495
Georgia, - -	195,443	18,458	3,764		217,665
South Carolina, -	206,109	48,768	26,242	17,663	298,782
North Carolina, -					
Virginia, - -	242	108	1,056		1,406
Baltimore, -	106				106
Philadelphia, -	2,819			484	3,303
New York, - -	132,612	78,037	44,893	5,101	260,643
Boston, - -	2,435	173	3,038	226	5,872
Grand Total, -	1,537,901	368,259	165,458	156,226	2,227,844
Total last year, -	1,324,165	279,172	120,348	134,476	1,858,261
Increase, -	213,636	89,087	45,110	21,750	369,583

GROWTH.

	Bales.		Bales.
Total crop of 1823-4, -	509,158	Total crop of 1836-7, -	1,422,930
" " 1824-5, - -	569,249	" " 1837-8, - -	1,801,497
" " 1825-6, -	720,027	" " 1838-9, -	1,360,532
" " 1826-7, - -	957,281	" " 1839-40, - -	2,177,835
" " 1827-8, -	720,593	" " 1840-1, -	1,634,945
" " 1828-9, - -	857,744	" " 1841 2, - -	1,683,574
" " 1829-30, -	976,845	" " 1842 3, -	2,378,875
" " 1830 1, - -	1,038,848	" " 1843 4, - -	2,030,409
" " 1831-2, -	987,477	" " 1844-5, -	2,394,503
" " 1832-3, - -	1,070,438	" " 1845-6, - -	2,100,537
" " 1833-4, -	1,205,394	" " 1846-7, -	1,778,651
" " 1834-5, - -	1,254,328	" " 1847 8, - -	2,347,634
" " 1835-6, -	1,360,725	" " 1848-9, -	2,728,596

CONSUMPTION.

Total crop of the United States, as above stated, - - bales		2,728,596
Add stocks on hand Sep. 1, 1848; southern ports, 113,471; northern, 57,997		171,468
Makes a supply of - - - - - - - - - - -		2,900,064
Deduct export to foreign ports, - -	2,227,844	
Less foreign included, - - - - - -	1,122	
Stock on hand Sep. 1, 1849, southern ports, 72,468;	2,226,722	
northern, 85,285 - - - - - - - - -	154,753	
Burnt at Charleston and Mobile, - - - - - - - -	550	
		2,382,025
Taken for home use, - - - - - - - - -		518,039

QUANTITY CONSUMED BY, AND IN HANDS OF, MANUFACTURERS.

1848-9, - - - - - - bales	518,039	1836-7, - - - - - - bales	222,540
1847-8, - - - - - - - -	531,772	1835-6, - - - - - - -	236,733
1846-7, - - - - - - - -	427,967	1834-5, - - - - - - -	216,888
1845-6, - - - - - - - -	422,597	1833-4, - - - - - - -	196 413
1844-5, - - - - - - - -	389,006	1832-3, - - - - - - -	194,412
1843-4, - - - - - - - -	346,744	1831-2, - - - - - - -	173 800
1842-3, - - - - - - - -	326,129	1830-1, - - - - - - -	182,142
1841-2, - - - - - - - -	267,850	1829-30, - - - - - - -	126,512
1840-1, - - - - - - - -	297,288	1828-9, - - - - - - -	118,852
1839-40, - - - - - - - -	295,193	1827-8, - - - - - - -	120,593
1838-9, - - - - - - - -	276,018	1826-7, - - - - - - -	149,616
1837-8, - - - - - - - -	246,063		

In our last annual statement, the estimate of cotton taken for consumption for the year ending September 1, 1848, in the States south and west of Virginia, was probably below the mark. The following for the past year is believed to be very nearly correct. The number of mills has increased since that time, and is still increasing. The following estimate is from a judicious and careful observer at the south, of the quantity so consumed, and not included in the receipts. Thus, in—

North Carolina,.....bales	20,000	Ohio,.....bales	9,000
South Carolina,..... "	15 000	Pittsburg, Wheeling, etc.,..... "	12,500
Georgia,..... "	20,500	Missouri, Indiana, Illinois, etc., "	9,000
Alabama,..... "	7,000		
Tennessee,..... "	12,000	Total, to September 1, 1849,....	110,000
Kentucky,..... "	5,000	Same time, 1848,.....	75,000

Virginia manufactures more than 20,000 bales, and obtains a portion of it by importations from the southern and northern ports.

To which should be added the quantity burnt in the interior, and that lost on its way to market; these, added to the crop as given above, received at the shipping ports, will show very nearly the amount raised in the United States the past season—say, in round numbers, 2,840,000 bales.

If these figures be under or overrated, we request of gentlemen interested in the cotton manufacture in the several States named above, or of any others well informed on the subject, to furnish us more corret ones.

The quantity of new cotton received at the shipping ports up to the 1st inst., amounted to about 575 bales, against about 3,000 bales last year.

The shipments given in the above statement from Texas, are those by sea only; a considerable portion of the crop of that State finds its way to market via Red river, and is included in the receipts at New Orleans.—*N. Y. Commercial List.*

MISCELLANEOUS.

CHOLERA IN SAINT LOUIS IN 1849.

Desiring to preserve the principal facts relating to the epidemic which prevailed in St. Louis for several months of the present year, we requested some of our medical friends, after its disappearance, to furnish us with an article, embodying such observations as in their opinion would be useful, especially, to our own citizens. But having waited in vain for a communication on the subject, until the close of the year, we are unwilling to permit an event so important, to pass without notice in our journal.

The Cholera made its appearance in St. Louis, early in January, of the present year; and although no serious apprehension was felt by the community at large, until about the first of May, sporadic cases occasionally occured during the winter and spring.

The following table, furnished by the City Register, shows the number of weekly interments from the first week in January to the first of October.

FOR THE WEEK ENDING.		TOTAL.	DEATHS BY CHOLERA.
January,	8,	87	8
"	15,	63	3
"	22,	77	17
"	29,	49	5
February,	5,	37	4
"	12,	65	11
"	19,	70	4
"	26,	69	0
March,	5,	59	3
"	13,	64	7
"	20,	92	26
"	26,	79	24
April,	2,	65	17
"	9,	74	16
"	16,	80	24
"	23,	106	27
"	30,	131	41
May,	7,	135	78
"	14,	273	185
"	21,	192	127
"	28,	186	115
June,	4,	144	75
"	11,	283	191
"	18,	510	404
"	25,	163	589
July,	2,	903	619
"	9,	773	591
"	16,	867	639
"	23,	442	269
"	30,	225	93
August,	6,	152	34
"	13,	117	12
"	20,	94	4
"	27,	73	3
September,	3,	71	4
"	10,	66	3
"	17,	88	1
"	24,	80	5
October,	1,	77	0
Total interments,		7,821	4,613

The following table shows the number of interments in the different Cemeteries, from January 1st to July 30th 1849.

CEMETERIES.	TOTAL OF INTERMENTS.	CHOLERA.
Christ Church,	255	158
Methodist,	517	286
Wesleyan,	320	220
Presbyterian,	224	139
Baptist,	58	44
Lutheran,	238	166
Holy Ghost,	735	505
German Protestant,	722	491
Hebrew,	13	10
City,	1596	1025
Catholic, (old)	1526	919
" (new)	347	550
St. Vincents,	452	329
Total,	7,003	4,547

RECAPITULATION.

	TOTAL.	CHOLERA.
In five first named cemeteries of different nations, and Protestant denominations,	1,374	847
In the German Protestant,	1,695	1,161
In three Catholic,	2,325	1,503
In City Cemetery,	1,596	1,025
In the Hebrew,	13	10
Total,	7,003	4547

The greatest number of interments was on the 10th July. Total, 184; by cholera, 149.

The mortality from other diseases during the prevalence of the Cholera was about double that of ordinary seasons. It is proper to notice the important fact that, although there was no considerable district exempt from the disease, yet those neighborhoods which are known to be most unhealthy, at other times, suffered most severely. Around Chouteau's Pond, and in the newly settled district in the neigborhood of Biddle street, where there were many sinks, holding water, the disease was most fatal. These are such localities as an observing stranger would unhesitatingly pronounce unhealthy. Compared to other portions, there were but few deaths in that part of the city where the streets are paved. Stagnant water, mudy streets, and earth recently removed by excavation, &c., seem to have attracted the epidemic in its worst form.

The mortality among the foreigners was much greater than that among the citizens of American birth: perhaps in proportion of four to one. At the coal mines, about five miles south-west from St. Louis, the disease was quite as fatal as in the city.

During the prevalence of the epidemic the wind generally prevailed from east to south-east. Rains were frequent—there was much cloudy weather, and the temperature, perhaps, rather below that of average seasons. It was observed that a few days of hot sun after copious rains increased the disease.

We have stated these facts as the result of our own observations, and venture to express the opinion that, notwithstanding the cause of Cholera remains a mystery, yet, in many respects, it is obedient to the laws that control other diseases; and that in general it may be avoided by th exercise of prudence, guided by a reasonable knowledge of physical laws.

THE

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ART. I.—EMIGRATION.

Were the relations between individuals, communities, and nations permanent and immutable political economy might be classed with the exact sciences; and a few simple rules, being committed to memory, would serve as guides until the end of time. But these relations being subject to continual changes, and each change being governed by laws peculiar to itself, any system, therefore, that can be devised by man must, in time, become inapplicable to the condition of the people for whom it was framed. And, hence, it is important that we should not only observe the current events, but, anticipate their coming, and shape our plans in reference to the changes which they are likely to produce.

No age, perhaps, since the dawn of civilization, has been so fruitful in events, affecting the social condition, as is the present: and no other part of the earth is likely to be so immediately, and so much affected by their occurrence as the valley of the Mississippi.

Among the many important subjects which present themselves for consideration there is none, perhaps, more interesting to this region than the continual increase of emigration from east to west. The extent of this movement at present, in many respects, has no parallel in history; and is calculated to affect, in some degree, the social condition, not of the United States only, but of Europe, and of Asia also.

The people of this country have been so long familiar with the settlement of new districts, and the consequences which have attended the hitherto gradual increase of population in newly settled territories, that, they are not yet awakened to the change which has taken place in the character of the emigrants. Formerly, the pioneer was a hunter. Clothed in skins, and equipped with butcher-knife, shot pouch, and deadly rifle, he pursued his solitary sports, in the deep recesses of the wilderness, "far from the busy haunts of men." Caring not for the society, and scorning the false allurements of civilization, his wants were few: and these being supplied, mostly, from the forest, he made but little progress in the civil arts. Next came the herdsman with his cattle,—seeking a natural pasture for their subsistence; but

the wants of his family requiring bread and a shelter, he reared the log cabin, and by slow degrees became a farmer. But, like his precursor, the hunter, he done but little to develop the resources of the country. But the solitude of the wilderness having been broken by these daring pioneers, they were followed, in time, by the more industrious farmer and the merchant; but the artizan, and the manufacturer lingered long in the rear; for it was their interest to remain behind so long as the inhabitants of the new districts continued to purchase their products. And thus the producers of raw material, and the producers of works of art became widely separated from each other.

But the hunter and the herdsman, no longer constitute distinct states of society in our new settlements. In times past these conditions were natural, and, to a certain extent necessary: the habits and pursuits of these hardy pioneers fitted them for the perils by which they were surrounded; and they may be regarded as the conquerors of the country from the savage tribes, and beasts of prey. Their privations and deeds of daring constitute the ground work of American romance; and the tradition of their lives, and perilous adventures will furnish the future historian with fabulous heroes, not less renowned, perhaps, than Hercules or Jason.

Gradually, but yet rapidly, a change has taken place in the process of settling new countries; especially in the more northern districts of the west. Instead of being preceded, as formerly, by the hunter and the herdsman, the substantial and intelligent agriculturist is the pioneer. Instead of the butcher-knife and rifle, worn for the destruction of wild beasts, and as a defence against the Indians, he goes forth armed with the implements of husbandry, to subdue the earth. Nor does he come alone: he brings with him the merchant and the artizan; the school master and the minister of religion are also in his ranks; and the foundations of civilization are laid deep and strong in the begining. The neat and comfortable dwelling, the farm, the garden and the orchard; the school house and the church; commerce, and the arts; all planted and established in a country of matchless fertility, grow up together. And scarcely are the foot prints of the savage obliterated from the soil ere the rail-way is projected; and the new settlers hold communion with their friends in distant portions of the land by the agency of electro-magnetism. This is no fancy sketch. It scarcely comes up to the truth, in respect to the settlement of Wisconsin and Iowa.

This improvement in the condition and character of the new settlements is destined to produce important changes in the commercial and political relations of the entire country; and a glance at the elements in operation will show that, even now, these changes are rapidly progressing. In the year 1830 the population of the United States was 12,866,020 including seamen &c. The Atlantic States, fifteen in number, and the District of Columbia, contained 9,147,461; and the new States and territories 3,707,089. In the year 1840 the entire population amounted to 17,069,453; a gain of 4,203,433. The increase in the 15 Atlantic States including the District of Columbia was 1,481,443, being about 16 per cent. While the increase in the new States and territories was 2,721,990, or more than 70 per cent. If the same rate of increase should have been sustained in the respective parts of the Union, since 1840 the census of the present

year will show a population in the Atlantic States of about 12,330,000; and in the new States and territories excepting Texas, California, Oregon and New Mexico, a population of about 10,880,000: and about 10,000,000 of this number will be in the basin of the Mississippi. But the emigration from Europe, from the year 1840 up to June next, will probably amount to 1,500,000; and it is fair to suppose that 1,000,000 of this foreign population has come to the west. The census, to be taken the present year, will show a populaton for all the States and territories of about 24,000,000; and from 10,000,000 to 11,000,000 will be found in the valley of the Mississippi. The natural increase in the population of the United States, for the next ten years, will be about 800,000 per annum; but, we shall, in all probability, receive 500,000 emigrants annually from Europe and Asia; if so, this will swell the number of population in 1860 to 37,000,000; and of this number about 20,000,000 will be located in this valley. By that time, our settlements will, in all probability, extend up the valley of the Missouri to its sources, in the Rocky mountains, where, as we are informed, is found one of the most beautiful and healthful regions on the continent. Now, on the supposition that our deductions should be true, or nearly so, it is evident that our commercial and political relations, in respect to the Atlantic States, will be materially different in the year 1860, from those at present existing. Our estimates of the foreign emigration may appear startling, and, perhaps, extravagant to some of our readers. But the following table, from the "Merchants' Magazine," showing the annual arrivals at New York, for 30 years, goes far to sustain our calculations; especially when we look at the causes operating in Europe, and reflect that the transportation of emigrants is becoming a regular branch of commerce.

ANNUAL ARRIVALS OF IMMIGRANTS AT THE PORT OF NEW YORK.

Years.	Passen's.	Years.	Passen's.	Years.	Passen's.
1819	9,442	1829	16,064	1839	48,152
1820	4,420	1830	30,224	1840	62,795
1821	4,452	1831	31,739	1841	57,337
1822	4,811	1832	48,589	1842	74,949
1823	4,999	1833	41,752	1843	46,302
1824	5,452	1834	48,110	1844	61,002
1825	8,779	1835	35,303	1845	82,960
1826	9,764	1836	60,441	1846	115,230
1827	22,000	1837	54,975	1847	166,110
1828	19,023	1838	25,681	1848	191,909
First 10 years	93,152	Second 10 years	392,878	Third 10 years	906,746
Total in 30 years					1,392,776

The author remarks, that, "the arrivals in 1849 will be over 350,000. The table gives the number at New York only. In the year 1847, the arrivals in the United States were over 250,000, or 90,000 more than in New York. In 1848 they were nearly 300,000, and this year may reach 500,000."*

It would seem that, in spite of all the theories on the subjects of population, and of commerce, the people of Europe, following their instincts, perhaps, more than their reason, have resolved to come to the country where the means of subsistence are abundant, rather than

*This estimate, we think is too large for the year 1849, but there can be little doubt that the number of foreign emigrants will reach 500,000 the present year.

to abide the contingencies of starvation in their native land. This has become one of the prominent ideas of the age, suggested by the principle of self-preservation, and being practicable, it is impossible to foresee the extent to which it will be carried out by the people of Europe and of Asia. The amount of labor, and of skill in the arts, which these emigrants bring into the country will soon produce results that few individuals have as yet contemplated. It will open our mineral wealth; facilitate the construction of internal improvements; furnish us with all the commodities of the handy craftsman; and, build up a home market for the products of the soil. It will establish a commercial system in the valley of the Mississippi, founded on natural principles; a system independent of, yet connected with every part of the world. And thirty years will not elapse before the most extensive distributing market, on this continent, will be found on the bank of the Mississippi. For, besides the agricultural, mineral, and manufactured products of this region, the sugar, molasses, coffee and other commodities of tropical climes; the commerce of the Pacific ocean; and a large portion of the European commerce, consumed in the valley of the Mississippi, will be sent here, directly, for distribution. Furthermore, there can scarcely be a doubt that the southern States will in time manufacture the greater part of the cotton crop; and instead of sending their fabrics to the eastern cities, they will be sent to the cities of the west, for distribution and consumption. And a similar policy will be adopted, to some extent, by the eastern manufacturer also. Even at the present time, almost the entire amount of the hardware and queensware, of European manufacture, sold and distributed in St. Louis, is imported directly by the dealers at this place: and, as the demand increases, the importation of other commodities will follow. For, if the American merchant should be slow to adopt this system, it will be established by foreign dealers who will readily perceive that by establishing houses here they will hold an advantage over those who purchase in New York, to the extent of the profits made by the merchant in that city. Indeed, Europeans are already looking to St. Louis for a market; and we understand that many agents, from both England and France, have visited here this season, soliciting orders.

The extraordinary growth of the commercial cities, on the Atlantic, for the last twenty years, has been sustained, principally, by Western and Southern commerce; but as the changes, in our population and commerce progress, this growth will be transfered to western cities, and be more rapid here than it has ever been there; because of the continual augmentation in the increase of our population and products.

Hitherto, the difficulties of procuring labor, and of finding a ready market, have been among the causes preventing the manufacturer and artizan from establishing themselves in the West; but we think if they will carefully examine the facts which we have stated, they will conclude that these objections will not be likely to exist in future. For in a country where the population is increasing at the rate of one million a year, as will shortly be the case, if not now, in this valley, the supply of labor and of consumers must both be abundant, beyond all precedent.

Such important changes in the social and commercial relations of a large portion of the inhabitants of the earth, are calculated to suggest a

variety of interesting inquiries. It is natural that an American by birth, should feel some apprehension that so large an infusion of foreign population will produce a deteriorating effect upon the American character: from this cause however, we think, there is nothing to fear. It is generally admitted, we believe, that the amalgamation of different families of the same race improves the physical development, and imparts energy to the mental faculties of the offspring. Actuated by motives similar to those which induced our own ancesters to emigrate, and coming from the same stock, it is natural that these emigrants should aim, in concert with ourselves, to attain one common end; and, if we act wisely in reference to these new constituents they may be regarded as calculated to energise and elevate our national character. By imbracing the offspring of so many families in our political institutions, the influence which they are destined to exert over the condition and policy of foreign nations will be greatly augmented: and the glory and renown of our own country exalted.

The adaptation of the people of different nations to employments and arts peculiar to themselves, will greatly diversify the pursuits of this country; and while this diversity of pursuits will tend to develop our own vast and varied resources, it will render us less dependent on foreign countries; and we shall become, not only the distributors, but, the producers and exporters also of many commodities which are now obtained from other lands.

From the most remote ages of history up to the present day, commerce, as the agent of civilization, has been progressing westward; but like political power, in one respect, it requires a seat of empire, whence its operations are controled throughout its dominions. But as civilization progressed, these imperial stations, falling too far in the rear, were abandoned for more convenient locations. Established on the eastern shore of the Mediterranean, the seat of commerce remained at Tyre for many ages before it was removed to Europe. Leaving Tyre, it crossed the continent of Europe, and is now established on one of its western islands, as if, waiting to embark for America; and, indeed, it may now be regarded as on its voyage hither. Its first station will doubtless be established on our eastern coast: but will it long remain there? We think not: for when the valley of the Mississippi shall have become densely inhabited, our eastern cities will be too remote from the great body of the population; and our internal, southern, and western (Asiatic) commerce, greatly preponderating over that between this valley and the eastern States, and of Europe, the seat of commerce for this continent, at least, will be transfered to, and permanently located on the bank of the Mississippi. Here, European and Asiatic commerce will meet for exchange and distribution: and the causes which have compelled the abandonment of the ancient commercial cities, will no longer exist; and we have good reason to hope that this continent will never be marked by the ruins of an extinct commerce, like those that indicate its route through other countries. Many ages have elapsed since Babylon, Palmyra, Tyre and Cartharge were left in ruins; and even the cites of some of these are becoming doubtful. Alexandria and Venice, though not fallen so low, have long been in a state of delapidation. Bruges and Antwerp, though not so renowned as the more ancient commercial stations, have also declined; and we predict that the time is not far distant when

the scepter of commerce will depart from London, its present imperial seat. But whether this great commercial emporium is destined to share the fate of the ancient commercial cities, can only be revealed by time. All these great cities were built by foreign commerce, aided, in some instances perhaps, by political power; and when the power which brought them into existence failed, they fell into a state of decay; for the resources of the surrounding countries were insufficient to sustain what foreign commerce had created. But such is not likely to be the case in respect of the great commercial cities that may rise up in this valley; for the immediate resources of the country, will of themselves be sufficient to sustain cities, in all respects as important perhaps, as were those of Asia and of Europe.

It is not our purpose to produce excitement in respect to the building of towns and cities in the west. The growth of commercial cities depends mainly upon the development of the resources of the countries in which they are located, and all attempts to force them beyond this point must sooner or later end in disappointment and disaster.

Our main object, in noticing the great influx of emigration, has been to call attention to the advantages which we think it affords to the establishment of manufactures in the valley of the Mississippi: we believe that the time is now ripe, or at least rapidly maturing, for a great movement in this behalf; and were our advantages understood and properly appreciated at home and abroad, many years would not elapse before this region would become as productive in works of art as it now is in the fruits of the soil.

ART. II.—LIFE AND TIMES OF GEN. GEO. R. CLARK.

EXPEDITION TO KASKASKIA.

We are living in the midst of internal peace, unequalled freedom and prosperity unsurpassed upon the earth. How have those glorious results been obtained in this ancient province of Louisiana? It successively enjoyed the government of France and Spain, in the hey-day of their power and greatness; and yet it is just forty-five years ago since it passed, in poverty and insignificance, into the hands of our countrymen? How has this wonderful social revolution been accomplished? Not by any series of battles, on this side of the Mississippi. Our contest with the Indians, on this side of the great Father of Western waters, have been comparatively insignificant. The power of the

red man was ready broken to our hands, by other efforts, at other times; and here we are, in the abundant enjoyment of the luxurious fruits growing from these efforts. Still the question recurs to every generous and curious spirit, how have our countrymen so wonderfully surpassed the efforts of two of the most powerful monarchies of Europe, directed for 130 years to the colonization of Louisiana? The causes of this mighty social problem are no doubt complex, we only undertake to state one; the military agency in producing this extraordinay progress. The prosperity and growing greatness of Missouri are to be traced in the first place, to the efforts of the pioneers on the eastern side of the Mississippi, here was the hive from which issued our swarm. And whom shall we select out of that brave and manly band, that have fought and won the great battle of western civilization against the savages of North America? I have chosen *George Rogers Clark.*

His life and times form a nucleus, around which most suitably gather the early circumstances of Western history, most likely to interest. It is to this era we must look for the essential conquest of Trans-Mississippi region, whose first foreign fruit is, the noble State, we live in. The time of this passage in Western history, in which Clark was the earliest and most distinguished chief, will reach from about 1774 to 1794, or from a little after the bloody battle of Point Pleasant, fought at the mouth of the Big Kenhawa, in 1774, to that gained by General Wayne, at the rapids of the Maumee, in 1794. What then, at the time indicated, was the condition of the Western country, limiting the term, at that time, to the Ohio valley? The white settlements had scarcely extended west of the present Pittsburgh, and indeed, east of it, there were fearful gaps of unsettled country. The first fort built, by our countrymen, on this side of the Alleghany (afterwards conquered by the French, and called Fort Du Quesne) was not till 1754, nor was it wrested from that nation, till 1758. True it is, there were many French villages of much earlier date, as at Detroit, Mackina, Vincennes, our own Cahokia and Kaskaskia, with a few scattering forts or stations, as they were termed, of our own countrymen. True, the hunters and traders had visited Kentucky, between 1767 and 1769. True it is, Finley and Daniel Boone, (may I not claim him as our own Missouri Boone as well as the great pioneer of Kentucky,) had borne back to their bold kindred and friends in North Carolina, the news of the fertile lands, the luxuriant cane-breaks, the abundant game of the West. Boone had told them, (I use his own language) "I have never seen the cattle more abundant in the settlements, than the deer in Kentucky." Still the vast section of country extending from the north-western lakes to the Cumberland mountains, and from the head of the Ohio, to the remotest west, in all the phases of the fluctuating term, was, ninety-one years ago, at the abandonment of Fort Du Quesne, by the French, essentially the dominion of the red man. This vast forest home of the Indian was dotted over, with villages of their numerous and war-like tribes. Their numbers on the eastern side of the Mississippi have been variously, and no doubt, loosely estimated, by the colonial writers; varying between 5,000 or 6,000 warriors, which, at the usual allowance of one-fifth for those of military age, would give a total Indian population of 25 or 30,000 for the region, which

has been mentioned. Indeed the testimony of all the missionaries and early hunters bears witness to the frightful solitudes, which the Indian country contained. But the tribes, which inhabited the western country were infinitely more formidable by their arts of war than their numbers would indicate.

Their ferocious customs of warfare, their undying thirst of vengeance upon an enemy, and profound subtlety, in prosecuting it, are still mournfully impressed on the memory of all the early immigrants to the western wilderness,—the great battle ground between the red and the white races of men. I will not dwell upon attrocities familiar even in this remote frontier of the great west. In the heart of the western country, south of the Ohio river, Kentucky, presented the first great body of fertile and level land, abounding in game and in salt licks. By some tacit agreement, this most smiling section of the west was reserved, by the tribes north of the Ohio, and south of the Cumberland rivers free from the occupation of either; though open to the hunting and war parties of both. It is a remarkable fact in Indian history, that so lovely a section of country, abounding in animals of chase, so much the delight, and even support of the Indian, should have been thus jealously reserved. Yet our oldest hunters found no Indian town within the limits of Kentucky; notwithstanding there are incontrovertible marks of ancient habitations, long prior to any visits of Europeans, or their descendants, to the western country of the United States. To Kentucky, thus bounteously endowed by the Creator, and so carefully reserved by the Indians, from any exclusive occupation by any one tribe, the western pioneers bent their restless, enterprising steps. I will not detain you, by recounting the various parties of hunters and settlers, some successful and others leaving their bones to bleach in the forest. Boonesborough, Harrodsburg and St. Asables, (the present Standford in Lincoln county, Kentucky) were established as stations or rude picketted forts, between 1774 and 1775. What their strength must have been, and what were their prospects of withstanding the united force of the wily and warlike tribes of Indians on the north and on the south, may be forcibly inferred from the fact that, in 1777, two years afterwards, the fighting men of Kentucky amounted, by a strict and easy enumeration, to 102. These were distributed as follows: 65 at Harrod, 22 at Boonesboro', and 15 at Standford or St. Asaphs.

Among the early adventurers to the west, thus exposed and thus sparsely occupied, was *George Rogers Clark.* Of the early years of Clark, little is known. His education, so far as books and artificial form enters into that comprehensive term, was necessarily limited, owing to the times, and the local deficiencies of his native county of Albemarle. Though that section of Virginia is now illustrated by the last and most honorable labors of the great Jefferson, in establishing the University of Virginia, his last legacy to his countrymen, —yet in 1753, the period of Clark's birth, and long afterwards, it was a destitute frontier. Clark, was, we learn, however, much devoted to the several branches of mathematics. He, like our illustrious Washingston, was early engaged in the manly and invigorating business of land surveying, under Col. Crawford, afterwards burned to death by the Indians. There seems a natural association, between feats in war and this business, so hazardous amid the privations and

dangers of Indian frontier. From this employment, Clark, in common with most of the gallant spirits of the time, withdrew, to engage in Dunmore's war against the north-western Indians, in 1774. He commanded a company in the right wing of the army employed in that inefficient campaign. I would detain you over the bold and gallant efforts of the troops comprising the left wing of this army under the command of Col. Lewis, at Point Pleasant, but I have too much before me to permit of even this digression, brilliant as it is, in the history of western riflemen. Suffice it to say that, it was a day's battle from dawn till dark. In 1775, Clark first visited Kentucky. Supposed to be quieted by Dunmore's treaty, at Camp Charlotte, on the Scioto, Kentucky was, at that day, the favorite theatre of romantic enterprise and gallant daring. Shall I be understood, when I say, it was the California and Oregon of those times, with a thousand fold their dangers and difficulties. He penetrated to Harrodsburg, which now had been re-occupied by Col. Harrod, after the battle at Point Pleasant. The appearance of Clark, says the late Humphrey Marshall, the primitive and graphic, though bitter historian of Kentucky, was well calculated to attract attention, it was rendered particularly agreeable by the manliness of his deportment, and the intelligence of his conversation; but above all, by the vivacity and boldness of spirit for enterprises and the determination he expressed of becoming an inhabitant of the country. Clark, after spending some time among the various stations, now returned to Virginia; but in 1776, again visited Kentucky, which he found much agitated, about the title set up by Henderson and company, of North Carolina, to all the lands between the Kentucky and the Tennessee rivers. I would not allude to this forgotten and obsolete land company, were it not connected with one of the most romantic incidents in the history of the west—I mean the first legislative body which ever assembled west of the Alleghany mountains. This was a convention, which met, upon the invitation of Henderson and his partners. This land company had, at the treaty of Wataga on Holston in Tennessee, in 1774, purchased of the Cherokees their title to the portion of Kentucky, which I have just mentioned. This assembly, composed of seventeen deputies, from all the settlements of Kentucky formally met together, under the shade of a large elm tree, at Boonesborough, in May 1775. This archetype of so many legislative bodies itself beset with formidable savages, in the midst of their forest homes, adopted and established some of the most substantial elements of free and sound government known to American law, for the government of the colony of Transylvania, as they termed their new home. This is one of the most curious incidents, in the annals of the west. It is the dawn of political government, which has since risen in the western country, to meridian splendor. It is a passage in western story, little known even in Kentucky; it is, indeed, a renewal, in the forests of western America, of the noble contract formed in 1620 on board the May Flower in the waters of the old Bay State. This small body of seventeen members, the embryo of a thousand legislative assembled met, in all this primiture simplicity, covered by no architecture but that of the great mechanic of the universe. Daniel Boone, his brother Squire, Calloway, the Todds, Levi and John, and Harrod, all

names of subsequent celebrity, were members of this primitive convention. At this assembly, a formal contract was entered into, between the people of the colony of Transylvania and the proprietors signed by both parties; it still stands in the journals of the convention. By this compact, the great principles of free government were distinctly expressed and recognized—the power of taxation, in the assembly, their election by the people,—the payment of the judges—their *independent* terms of office,—the trial by jury—the writ of habeas corpus—and even the election of their own treasurer, by the assembly. But this proprietary government notwithstanding all those constitutional formalities, was destined to a shortlived existence: neither the disturbances of an interregnum, nor the commotions of a revolution, which shook the continent to its centre, disturbed the vigilance of Virginia, from the government set up by Henderson and company on her western border. Other circumstances contributed their force to confirm the stern jealousy of the old unterrified commonwealth. The dissatisfaction of the pioneers with the *quit rents* demanded by the great land company, the interest of Virginians in the Virginia title to a western world. This conflict of title naturally agitated a people whose hearts were set as much on good land, as misers are on gold. In this excitement and anxiety about land titles and government, George Clark and a Gabriel Jones were formally elected members of the Virginia convention, then sitting at Williamsburg, to procure aid from Virginia and put an end to their perplexities.

Nor was their mission any holyday affair; no errand of modern diplomacy adorned and protected by the pride and power of a great country, with outfits and frigates. It was pursued *on foot* with rifle in hand, through an Indian wilderness of nearly 500 miles, which then separated the stations of the white man in Kentucky, from the settlements of Virginia. These had then barely passed the Blue ridge. On reaching western Virginia they found that the convention had adjourned; Clark, however, proceeded on his mission. Nor could the critical business of the backwoodsmen of Virginia have been deposited to able or more devoted hands. Patrick Henry was then at the head of the new State, the first of her republican chief magistrates. To this patrioic statesman, among the first in our republican school, Clark communicated the object of his journey—to procure aid and acknowledgement, for the backwoodsmen of Virginia. It met with his candid approbation, and the Governor, (who was himself sick,) gave Clark a letter to the executive council of the State. Upon the strength of this recommendation, our hero made application to this body for the seemingly pitiful assistance of 500 lbs. of gunpowder, to defend the stations of Kentucky. The council were disposed to *lend* this great military supply, provided Clark would give *security* for its return should the assembly require it, and would, moreover, bear the expense of its transportation to the western country. When this memorable order of council was delivered to Clark, he returned it, informing the council of his inability to comply with their onerous conditions, significantly adding that, a country which was not worth defending was not worth having; and regretting that the Kentuckians must seek assistance elsewhere, than from their native State. The result of this negociation was to give Clark an order for the gunpowder at Fort Pitt, then under the government of Virginia. The order

bears date 23d August 1776. It may gratify the curiosity of some, to know the value of the first subsidy of Virginia to her pioneers in the west, at $2,66 per lb. it amounted to $1,333. In this most opportune aid to a few forlorn stations in the lone wilderness, is found the first official communication between the vast dominion and her eldest daughter in the west. Yet, fraught with their very existence, as was this slight military aid to the backwoodsmen, the letter of Clark apprising them of the fact, in that day of imperfect and private communication, miscarried. But Clark's exertions did not rest here, on the re-assembly of the legislature of Virginia, in the fall of 1776, he applied to that body, and, notwithstanding a strenuous opposition obtained the establishment of the *county* of Kentucky with the identical limits which belong to the State of that name. This first political organization of the western country, independent of the illegal attempt of Henderson and company, to establish the colony of Transylvania, must be mainly placed to the credit of Clark; he incontrovertibly is to be ranked as the founder of Kentucky. It was now, the autumm of 1776, when Clark and Jones learned the painful fact that, the precious gunpowder so fondly obtained was still lying at Fort Pitt. They determined to return home and take the gunpowder with them. Fort Pitt was now surrounded by groups of suspicious and discontented Indians, partly provoked by the intrusion of our people into their favorite hunting grounds in Kentucky, and partly instigated against Americans by British hostility. Our commissioners lost no time in procuring a boat and men to transport the gunpowder to Limestone, the present Maysville in Kentucky. After toils and vigils scarcely capable of being appreciated in these soft and piping times of peace, followed by Indians the whole way, they succeeded in burying the gunpowder at the banks of Limestone creek, from whence, it was afterwards escorted by another party in safety to Harrodsburg. The next project of Clark was on a grander scale—to lead an expedition against the British forts in the western country at Detroit, Vincennes and Kaskaskia. These he saw, were the sources of Indian devastation in the west. The ravages which were terrifically brought home to every log cabin on the frontier, were stimulated and fed, by the ammunition, arms and clothing obtained by the Indians from the general enemy, then in possession of these posts. On the 10th of December 1777, Clark opened the plan of his Illinois campaign, to Governor Henry. Several companies were held by the governor with the influential men of the State, the result was, a full approval of the expedition, by the Executive of Virginia, and a pledge subscribed by such bright patriots, as George Wythe, George Mason and Thomas Jefferson, that they would exert their influence with the Virginia legislature to obtain a bounty of 300 acres of land for every private soldier engaged in the expedition. On the 2d of January 1778, Clark received a commission of Lieutenant Colonel with two sets of instructions, one public directing him to Kentucky for its defence, the other confidential, ordering an attack upon Kaskaskia. It was late in the season when Clark left Fort Pitt with three companies, with a considerable number of families and private adventurers, expecting a reinforcement from Kentucky. The voyage down the Ohio was prosecuted, as it demanded, with profound caution. When arrived at the Falls of Ohio, Clark landed his men for refreshment, on *Corn Island*,

opposite the present city of Louisville, where he built a rude fort, the first germ of that flourishing city. At this point, where he expected to receive a *battalion*, Clark obtained but one company. The real destination of the expedition was now diclosed to the men; who, most honorably to their gallant and patriotic spirit (the same heroic spirit which has animated their descendants to accompany the banners of the republic to Francisco and Santa Fe) was unanimously concurred in. There was a party of about 200 backwoodsmen, (the exact number is no where stated) composing four companies with scarcely any other resources than their rifles and their own brave hearts, it was about to make its way through a country of hostile Indians, when in their unbroken strength, from the Falls of Ohio to Kaskaskia; not a post to retreat upon in case of desertion but on this side of the Mississippi, then belonging to Spain; of suspicious and doubtful amity to the United States; no reinforcements, but such as they might win by their arms; and at the end of the route, they had to encounter forts amidst hostile settlements furnished, as they supposed, with everything which British opulence might have provided. This is an unvarnished statement of some of the difficulties attending this expedition. Such as they were, our gallant band, after passing a day of rejoicing with their fellow soldiers, at the Falls, who were about to return, upon a service of scarcely inferior dangers, to defend the interior stations of Kentucky, cheerfully set off to meet all the dangers and privations of this gallant expedition. It was now the 24th of June 1778, when the expedition started, all the baggage was left at the fort on Corn Island, except what was necessary to equip the party in the barest backwoods manner. At first Colonel Clark, as we must now call him, had meditated a blow at St. Vincent's, or Fort Sackville on the Wabash, the site of the present Vincennes; but on reviewing his little band, its paucity forcibly induced him to prosecute his original design against Kaskaskia. Behold then our gallant countrymen once more afloat in the Ohio trusting implicitly to the genius of their enterprising chief and their own brave hearts. On his way down the river, Clark most fortunately received a letter from Col. Campbell, of Fort Pitt, announcing the French alliance of 1778 with the United States, which subsequent events proved of the utmost importance to the American arms. At the mouth of the Tennessee, Clark met with some American hunters from Kaskaskia, who afforded him recent information respecting the condition of that post, which led to the conclusion that could he surprise it before the inhabitants were apprised of his intentions, his prospects of success were highly flattering. His informers, in proof of their sincerity, offered to pilot Clark's party to the British post. The boats now dropped down a short distance below Fort Massac; they were here concealed along the shore and the expedition started through the woods and swamps of Illinois, where, in hunter's phrase, there was not a stick amiss, towards the ancient French village of Kaskaskia, then the chief place in this section of the country. The march was attended with little that was unusual in these times of hardihood and privation, beyond the ordinary difficulties of a march, through a thick and sometimes swampy forest. Game and water, it ought to be added, were scarce.

On the evening of the 4th of July 1778, the Virginia riflemen overcoming all obstacles, arrived within a few miles of the town, undiscov-

ered. The party halted until dark, when a sufficient number of boats having been obtained for crossing the Kaskaskia river, two detachments passed over, while a third, under the Col. in person, proceeded against the fort. This was situated on the side opposite to the town, and was entered, by a postern gate, which was found open, and taken possession of, without striking a blow, or seeing a soldier of the enemy. The town, then consisting of 250 houses was surrounded and every avenue guarded; to prevent the communication of intelligence the governor Rocheblave was surprised in his bed, and, "in about two hours, says Clark, the town was disarmed without shedding one drop of blood." It was now learned that there was a considerable body of Indians in the neighborhood of Cahokia; but there were no regular British troops nearer than Vincennes and Detroit. After sometime M. Gibault the excellent Roman Catholic priest of Kaskaskia, accompanied by five or six of the grave and reverend seignors of the village, obtained permission to wait on Col. Clark. Shocked as the citizens of this secluded village had felt, by the capture of their town (and it could not have been more sudden if their captors had descended from the clouds) and by such an enemy as their imaginations painted our countrymen, the French party was still more shocked, when they entered Clark's quarters, at his appearance and that of his officers. Their clothes soiled and torn, by their river trip and long march through the woods, their other clothing left at Corn island, the appearance of this gallant band was anything, but civilized. It was frightful and savage, so Clark admits, to any eyes, and how much more so, to this French deputation, may well be conceived, by those, who know the refinement and delicacy of the ancient French, a few of whom still survive, to grace the principal city of our State. The Kaskaskia gentlemen were horror struck; it was sometime after they had entered, before they could summon fortitude to speak; and not then, till their business was demanded. They asked for the commander, so completely had this backwoods expedition confounded the distinctions of rank. Clark was pointed out to them, the priest then said, that the inhabitants of Kaskaskia expected to be separated never to meet again, and they, therefore, through him, solicited leave to assemble at their church to take leave of one another. It was granted in brief terms. The houses of the village were immediately deserted by all, who could leave them, to meet at the church, in order so they imagined, to bid each other a long farewell. It was, as they thought, preparatory to breaking up their ancient community. The assembly lasted a considerable time, when at length, another deputation waited on Col. Clark and expressed, in the name of the villagers, their thanks for the indulgence they had received; and begged to address their conqueror, on a subject dearer to them than any other; they were sensible that their present condition was the fate of war, and they could submit to the loss of property but they solicited that they might not be separated from their wives and children; and they begged that some clothes and provisions might be allowed for their support. Clark had now wound up the terrors of the villagers to the desired height, and he determined to try the influence which the lenity he had all along intended to exercise, might now produce from a sudden contrast of feeling. It was an innocent stratagem to augment the force of his slender corps. For this purpose, Clark abruptly

asked the deputies—"Do you take us for savages? I am almost certain you do, from your language. Do you think Americans intend to strike women and children and to take the bread out of their mouths? My countrymen, said he, disdain to make war on helpless innocence: it was to prevent Indian butcheries of our wives and children, that we have penetrated into the remote stronghold of British and Indian barbarity; and not to obtain despicable plunder. And now, to prove my sincerity, said the Col., you will please to inform your fellow citizens, that I am quite convinced, from what I have learned since my arrival among you, that you have been misinformed and prejudiced against us, by the British officers. Your friends, who have been placed in confinement, shall be immediately released. The rebound of feeling among the people when they heard of the magnanimous intentions of Clark, verified his sagacious anticipations. In a few moments the mortal dejection of the village was converted into extravagant joy; the bells were set to ringing and the church was crowded with worshippers, thanking God for their deliverance from the horrors which they had fearfully expected from the *Long Knife*, as the Indians had taught them to call the Virginians. Cahokia, then a flourishing village, next attracted the attention of Clark; he determined to attempt its capture, in the same manner, in which he had gained Kaskaskia. Suffice it to say, that it fully succeded, assisted by the good offices of the people of Kaskaskia with their friends and relations in Cahokia. A company of French volunteers accompanied the American party, under Major Bowman. On the 6th of July, Clark completed with unparalleled facility the military occupation of Western Illinois, or as the French called it, Les Illinois. In this change of dominion, let it never be forgotten that the ancient French most cordially co-operated with our countrymen in effecting it; aided, no doubt, by the alliance, between France and the United States, and that without their concurrence the retention of the country amidst hords of ferocious savages, by so small a body of Americans would have been impossible. But, though Col. Clark had now met with a success so much beyond his means; and almost beyond his expectations; although the French villages were entirely subjected and even attached to the American government, yet his uneasiness was great, at the critical delicacy of his situation. A close understanding was cultivated with the Spanish government, on this side of the Mississippi; every effort exerted to counteract the extended influence of the British over the Indians, whom they almost held at command. The bloody belt and hatchet, to use the metaphorical language of the Indian, had been distributed by the British, from Vincennes and Detroit to the Ohio and the Mississippi. The former port was particularly dangerous to Clark, from its strength and influence over the Indians, and proximity to himself on the Mississippi. It was, likewise, in the hands of very warlike tribes. "St. Vincents," says our hero, "was never out of my mind." I will not dwell upon a mission of M. Gibault and Captain Helm to get peaceable possession of this formidable point. Yet, it completly succeeded for a time, and the French inhabitants voluntarily placed themselves under the government of Virginia. But this possession did not last long. On the 29th of January, 1779, Col. Vigo, an Italian merchant of Vincennes, and said to be a partner with the Spanish govenor of St. Louis, arrived at Kaskaskia,

and brought the first intelligence that Vincennes was again occupied by the British—that Col. Hamilton, with an expedition from Detroit, had again reduced the post under the British arms. There is an anecdote connected with the surrender of Vincennes to Hamilton by Capt. Helm, which may illustrate the character of the followers of Clark. They were indeed the very elite of the western country, the hardy sons of hardy pioneers—the genuine yeomanry of the west. When Col. Hamilton entered Vincennes, there were but two Americans in the fort, at that place—Capt. Helm and one Henry. The latter had charge of a loaded cannon which was placed in the open gate of the fort, while Helm stood by, with a lighted match in his hand. So soon, as Hamilton appeared at the head of his troops within convenient hailing distance, Helm cried out in a loud voice "halt." This stopped the movement of the British; and a surrender of the fort is demanded. Helm swears "no man shall enter here, until I know the terms," "you shall have the honors of war," replies the British officer; and the fort was then surrendered with its garrison of *one* officer and *one* private. Hamilton was now in possession of this important point on the Wabash; but deferred operations against Clark, until the next spring. He, at that time, contemplated a grand campaign which Clark thus communicates to Gov. Jefferson. "After taking Kaskaskia," of which he entertained no doubt, "he was to be joined by 200 Indians from Mackinac and 500 northern ones with this force united to his own, this British officer was to penetrate up the Ohio to Fort Pitt, sweeping the stations of Kentucky in his way with light brass cannon taken for the purpose. So flashed with the confidence of conquest was the British commander, that he made no doubt of breaking up all west of Augusta, as the western frontier of Virginia was then called. But Clark had learned from Vigo that the British had but 80 of their own men at Vincennes with three small cannon and some swivals mounted. With a promptitude inspired by his genius for war, Clark, like the great Hannibal, when John Randolph (no mean authority) always considered his most appropriate original, determined to carry the war into the enemy's country—in other words to march against Hamilton at Vincennes. Clark afterwards observed "I know if I did not take him, he would take me." Nor was it the practice of our hero to postpone the execution of his plans, like the British officer till spring. A Mississippi boat, a keel boat most likely, if so good, was immediately fitted out as a galley, mounting two four pounders and six swivals, obtained from the enemy's fort at Kaskaskia.—This, he placed under the command of Capt. Rogers with a company of 46 men. This officer had orders to descend the Mississippi from Kaskaskia, ascend the Ohio as far as the mouth of the Wabash and proceed up that stream as far as White river, suffer nothing to pass her and wait there for further orders from Clark in person. The galley was accordingly dispatched on its bold errand the first of naval operations in the west; and while we leave it to prosecute its perilous enterprise, let us attend to another part of that expedition. When the enterprise against Vincennes was determined on, the French inhabitants of Kaskaskia and Cahokia, with the military spirit, which ever characterized their native country, raised two companies, commanded by Capt. McCarty and Charleville; these, added to Clark's original force diminished, by a detachment to the Falls of Ohio under Colonel Linn, amounted to no more than 170 men.

ART.—III. SCHOOL OF MINES.

We beg to acknowledge our obligations to Dr. King, for the following copy of a letter, addressed by him to our representatives in Congress, on the subject of an appropriation of land for the establishment and support of a "School of Mines;" and we join with the writer in earnestly urging upon Congress the importance of the measure.

Editors.

To the Honorable James B. Bowlin, W. V. N. Bay, James S. Green, W. P. Hall *and* J. S. Phelps, *Representatives of the people of the State of Missouri in the Congress of the United States.*

Gentlemen:—I had the honor yesterday of forwarding each of you by mail two numbers of the "Western Journal," containing articles advocating the memorial of the last session of the legislature of this State to the Congress of the United States, for an appropriation of public lands for a geological survey. I respectfully recommend these articles to your consideration and trust they will be found to contain facts and arguments which may be useful when the memorial is laid before the House of Representatives. To the people of Missouri this survey is a matter of the deepest importance, for in climate, soil, mineral productions, commercial and manufacturing facilities, nature has dealt with us in the most liberal manner, and our resources need but to be known, to be properly appreciated.

Whilst, however, Missouri will be specially benefited, I have endeavored to show, and I hope successfully, that the general government, as well as the people of the other States, have an interest in the survey sufficient to justify us in asking this appropriation. I have not allowed myself to look upon this memorial as an application for eleemosynary favor. I cannot view it as such, whilst the government of the United States claim a proprietary claim to so large a portion of our territory. After showing the importance of this survey in a national point of view, I have exhibited the impossibility of making it without embracing the public lands: the illiberality of refusing co-operation when both parties are alike benefited; the unreasonableness of expecting the people of Missouri to incur the entire expense, and the fallaciousness of such an expectation; and finally the injustice of withholding from us the assistance that has been given to other States for similar purposes. No grounds, even for a plausible argument against the appropriation, presents itself to my mind, and I cannot doubt, that with the able support you are so capable of giving the memorial, that Congress will readily grant it.

There is one subject in the memorial, gentlemen, to which, as I have scarcely referred in my articles, I would now respectfully call your attention: that is, the proposition to establish *a School of Mines and Agriculture.*

The mining interests of the United States have never received the attention from the general government, nor perhaps, from any of the State governments that they deserve. Since the days of Mr. Jefferson their importance in a national point of view has been astonishingly

overlooked, and now we find ourselves suddenly possessed of the most extended and valuable mineral possession of any nation amongst civilized people, as unprepared to manage or direct operations in them as the wild Indians that recently roamed over them. This neglect is the more remarkable as we have had the example of all the leading governments of Europe on similar subjects before us, and even before the acquisition of New Mexico and California we were scarcely inferior to any one of them in our mineral resources. When the territory of Louisiana became a part of the United States it is quite possible Mr. Jefferson contemplated the organization of some system, for the management and government of our mines, similar to the system adopted by the continental governments of Europe. A statesman of his enlarged views could not avoid seeing the importance of their development, and the necessity of placing them beyond injury from ignorance or the spirit of speculation. The act of 1807, reserving the lead mines and salines from sale indicates this. The fundamental principle of the "*droit regalien* (*Berg-regel* Germ.) was laid down by this act. But if ever a school of mines and regular corps of mining engineers, or any other system for teaching the arts of mining and metallurgy, and securing a proper administration of the mining affairs of the country was contemplated, it seems to have been entirely abandoned; the government reserving to itself and exercising only the most odious of its prerogatives, the privilege of a tax-gatherer. Missouri, after having waited patiently for more than twenty years, finding that nothing more was to be expected from the general government, obtained the passage of the act of March the 3d 1829, by which the mineral lands of this State, like other public lands became subject to private entry. This act annulled, or ought to have annulled all hopes that the government at Washington would take the course Mr. Jefferson seems to have had in view. By this act she abandoned the control over what was then, if it be not even now, one of her richest mineral possessions, and it is only remarkable after this, that she yielded with such apparently slow reluctance her right over the others. There is nothing left now but the recently acquired territories of New Mexico and California.

The latter a magnificent possession, where

"the glorious sun
"Stays in his course, and plays the alchemist;
"Turning, with splendor of his precious eye,
"The meagre cloddy earth to glittering gold:"*

It is extremely probable that the action of our government in this matter has been influenced by the example of Great Britain, as she is the only one of the several leading powers of Europe, that has not retained in some official form, a control over, or a supervision of her mining interests. The only one in which there is not a national school of mines to teach those upon whom the trust of directing or superintending this important interest may devolve, that knowledge which is absolutely necessary for rendering them competent to discharge their duties. If such was the case we were very unfortunate in the selection of a monitor. It is not necessary to enquire here why she has not such a control. The history of the organization of

*(King John, Act III. Scene I.)

the Government tells that. But the great error lay in supposing that the high position she occupies in mining and metallurgic operations was a proof that these pursuits, like agricultural, manufacturing and commercial ones, should be left free from all control of or connection with the government. This argument is fallacious in its foundation. A mine is different from a farm, and has no similitude to a manufacturing or commercial establishment. A farm may be worked for an indefinite period of time, and yet, if properly cultivated, be as productive as when first opened. A manufactory may go on for years increasing its production without the fear of exhausting the supply of its raw material, if it be of a nature capable of reproduction. A commercial establishment may grow up from the smallest beginning until it spreads its operation to every quarter of the globe without lessening or materially affecting trade in general, whilst it adds immensely to the stock or the capital of the parties engaged. Not so with a mine. It has no expansive capacity, no reproductive quality. Every pound of ore, metal or mineral taken from it, is so much towards its exhaustion. Every day's work done on it not only shortens its existence, but generally increases to a certain extent the cost of that which will be produced by the next. The working of a mine is like the prodigality of the spend-thrift, incessantly lessening the treasure on which it operates. This is the important distinction between the mining and all other great pursuits of a country, and it is this difference that justifies the government in whose dominions it is conducted in seeing that it is carried on in the most prudent, economical, and intelligent manner. There may be minerals, as for instance, coal and iron in several countries, so abundant, that the wastefulness or ignorance of ages can have but little effect in lessening the original supply. And yet there are other countries in which these very articles may exist to so limited an extent and under such unfavorable circumstances that every care must be taken to prevent waste and to cheapen the price of production, for the public good. The first is the case with Great Britain, the second with most of the continental powers of Europe. Great Britain, may well, therefore, trust the management of her mines particularly of iron, coal and lead to those interested in them; for the time is very remote when their exhaustion is to be apprehended; and more especially as she has a class of population whose long practical experience enable them to work these mines in the most advantageous manner. All attempts at monopoly under such circumstances would be absurd, and the people at large are thus protected from imposition, by competition, without the necessity of official interference. This is rarely the case in the territories of the continental governments. In many of these there are extensive mines giving employment to a large and industrious population, that would soon be ruined and abandoned, and consequently those dependent upon them rendered destitute, if it were not for the watchfulness of the government and the extreme prudence with which they are managed.

It is not because our mineral resources, especially coal and iron, and perhaps, lead and copper, do not equal those of Great Britain, that we committed an error in adopting her mining policy; but because we had not, and have not yet the mining population, the peculiar class of people that she has, that is necessary to render such a policy advisable. Nor unless we adopt some means of instructing them better than we now

possess, can we have such a population for some generations to come, composed of our own citizens.

These are the considerations that would have justified the government of the United States in the establishment of a school of mines and the organization of a corps of Engineers. This would have been a true protective policy, at least with regard to all our mineral productions. A policy that we think would not have been objected to, by any enlightened statesmen in the country. If, with this, the government had retained its proprietary right over the mines or disposed of them with a condition that they should be worked under the supervision of its officers, we should, at this time, be in a very different condition from what we are, in respect to our mining operations.

The opinion is common, and, no doubt, has had its influence, that, as the English are the best practical miners, and Great Britain the most productive mining country of Europe, that, therefore, the science of mining and metallurgy is better known there than elsewhere. As strange as it may appear, the reverse of this is the fact. What is known there is well known and well applied. But it is local knowledge, the result of daily, yearly experience, under the same circumstances and in the same mines, and often in the same minerals, by men whose business was not to philosophise, but to dig and pick. The literature of a country is the best means of determining the amount of intellect that may be devoted to any particular pursuit in it. This standard shows us at once the relative position Great Britain bears to other European nations. Whilst the press of France, Germany, and other continental powers is constantly issuing works of the highest merit on mining and metallurgy, England presents us nothing better than an article compiled for some popular Dictionary or Encyclopedia, and even these "few and far between." She is even indebted to foreigners for the best description of what she is doing. We look in vain in an English catalogue for such works as "The Voyage Metellurgique," "Traite des Essais," "De la Richesse Minerale," &c. With this explanation we can readily see the cause of the disastrous results that have attended English mining operations in other countries. The new circumstances under which they had to be conducted required something more than mere practical experience. They required the application of the most profound principles of the science. But an Englishman learns with reluctance anything new, out of England. He is, moreover, the most inelastic of all civilized beings. He seeks to make everything bend to him and his pre-existant opinions. When this cannot be done, one or the other generally *breaks* and the history of the mining operations of South America and Mexico shows that it is, by far most frequently, the Englishman.

The history of these unfortunate results on our own continent, should teach us the necessity of something more than even the best practical knowledge for conducting mining properly in a new country like ours, and make us feel how profoundly deficient we are in every thing relating to the subject. We are deficient—it is a humiliating confession, but the knowledge of it is the first step towards improvement—we are deficient in scientific and practical knowledge. We are children with an inheritance whose value is beyond calculation, if we will but learn how to use it. But where is the school? No where yet, in our own country. The government of the United

States declines to establish one, and there is no authority to whom we can look but the State governments.

There is no State of the Union that presents so many circumstances favorable to the establishment of such a school as Missouri. Its central position and the increasing facilities of travel render it easy of access to all. Its geological character is extremely interesting. Its minerals numerous, rare and valuable. Its smelting establishments rapidly increasing; the whole offering, it is believed, more advantages than can be found in any other State, for the study of mining and metallurgy successfully and practically. Such a school would not confine its benefits to Missouri; whilst it would prepare and furnish those persons now so much needed to take charge of and direct our mining and smelting affairs, it would furnish the country at large, with men in whose capacity confidence could be placed. Our mines, furnaces, and manufactures, would be managed by men whose feelings, habits and interests, would be congenial to the people. The States and Territories would be supplied with officers upon whom they could safely rely to fulfil the duties which the development of their resources might require. And the United States government itself would know where to look for and find citizens qualified in the highest degree for any future geological surveys, or other scientific explorations.

This school, though located in, and under the direction of the State of Missouri, will, therefore, be national in its benefits and purposes. If the Congress of the United States were to assume yet, the responsibility of establishing it under its own direction, there would be no place so appropriate for its location as Missouri: *the Saxony of the Union.* If, on the contrary, Congress confides it to Missouri, giving her that assistance which the importance of the subject demands, the result will be the same to the great interests of the country.

Such an institution must and will be established, somewhere in the United States. It is necessary. Already one of the literary institutions of New England has taken the initiative by the establishment of a Chair of Metallurgy, which has been liberally endowed by a wealthy citizen, late a member of the House of Representatives, and now our Minister to the Court of St. James. This is an indication of public sentiment, and an intelligent appreciation of public want. The eye of the Boston merchant, though far removed from this region, most deeply interested, saw it, and, availing himself of it, has added to his reputation and that of his enterprising fellow-citizens, for liberality and public spirit. He is deserving of the thanks of the people, but a matter of such great national importance should not be left to the patronage of any private individual. It is properly a subject belonging to the United States. But if she will not take hold of it, then should it be entrusted to that State government most deeply interested in it, and which presents the greatest advantages for its establishment.

I am so deeply impressed with the importance of this school, that I cannot close this without recommending an effort to be made to increase the appropriation asked for by the Memorial for one Township of land more in each land office district; if in your judgment it can be done without endangering the original proposition. I would have that Township specially located and the proceeds appropriated for the establishment and maintenance of the school only, with the provision, if necessary, that its teaching should be free to every citizen of

the Union. With such a school, Missouri would soon take the rank amongst the great mining countries of the world she ought to occupy, and her prosperity be immeasurably increased.

As this is a subject to which I have given much attention, and feel a deep interest in the development of the resources of our State, I trust you will excuse the liberty I take in addressing you this lengthy communication. I have the honor to be

Gentlemen,

Your fellow-citizen, &c. &c.,

H. King.

ART. IV.—PHONOGRAPHY.

Our acquaintance with the subject of Phonography is too limited to enable us to speak of its merits, or of its claims to public attention. That the art is of practical utility, in some respects, there is no doubt; but whether it can be applied to the purposes of facilitating the usual branches of education is a fact which, we think, remains to be established. If, however, as the author supposes, it is calculated to shorten the time, and consequently lessen the cost, of acquiring education, then Phonography assumes an importance, equal, perhaps, to any of the discoveries, or improvements of the age. We hope that those who have made themselves acquainted with the subject will persevere in their labors until a fair experiment shall have been made. If they succeed to the extent anticipated by the writer they will be entitled to the gratitude of mankind. Editors.

"Education," says Reed, "is the act of bringing up; instruction; formation of manners." It is the most distinguishing characteristic of mankind. It places man above the fowls of the air and the beasts of the forest—it is this that crowns him with honor and glory—that renders him but a little lower than the angels. That branch of education of which we are about to speak, contributes, we think, to this distinction in a very particular manner; and we also fully believe that its principles have only to be made known to be universally approved and adopted.

Everybody who has learned the English language is aware that there is no uniform method of representing distinctly the sound of the voice uttered in speaking: no correct guide to spelling: as the sound of the same letter and combination of letters, varies in different words. Spelling, with us, therefore, is a mere effort of memory, without method, science, or art; or, if it does partake in any degree of the latter it must surely be very imperfectly. It is asserted by

Alexander John Ellis, A. B. Fellow of the Cambridge (England) Philosophical Society, that "no one ever knows with certainty how to spell a word which he has only heard, and has not yet seen, and that no one ever knows with certainty how to pronounce a word which he has only seen, and never heard. If this assertion of Mr. Ellis is correct, and for our part we have not the least inclination to call it in question, what an amount of labor has to be performed, before one is master of spelling and pronouncing the English language? Every word has to be pronounced in the hearing of the pupil; until the distinct sound of each is fixed in his memory, before he can be said to be master of the art of pronunciation; and after this labor has been accomplished—after *eighty thousand* words have been committed to memory, the task is only half accomplished: orthography has to be learned, and to do this, the dictionary, from "Aaronic" till "Zootamy," must also be committed to memory; and after all this labor has been gone through with, ten to one but some words escape the recollection. And to what purpose is all this? Simply to learn the absurdities of an absurd, incomprehensible orthography. If the time spent in learning to pronounce and spell the English, was spent in acquiring the rudiments of the arts and sciences, schools and colleges would turn out fewer "educated" dunces; parents would have less cause to mourn over the slow progress of their children; fewer complaints against teachers; education would be what it ought to be, "knowledge, instruction;" and people generally would not be so profoundly ignorant as at present. It could not then in truth be said that—

> "wandering oft, with brute unconscious gaze,
> Man marks not **** ***** *** the mighty hand
> That, ever busy, wheels the silent spheres."

But it may be asked, how is man to become acquainted with the arts and sciences; or how acquire knowledge without learning the orthography of his mother tongue? While there was nothing better to substitute it was no doubt necessary for an English scholar to learn English orthography; but a system has been discovered possessing superior advantages—a system which discards the irregularities of spelling—a system, by which no difficulty can be experienced in spelling any word which can be pronounced with accuracy; and by which no doubt will be experienced as to the pronunciation of any word which meets the eye—a system, too, so simple, that a child eight or nine years old can learn to read in a week—and that system is

PHONOGRAPHY.

Phonography is based upon the science of sound. The name is composed of two Greek words. *Phone*, *sound*, or *voice*; and *grapho*, to *write*, signifying merely the writing of sounds, or writing according to sound.

In the English language there are forty-two sounds, that is, including the compound sounds of *ch*, *dj*; *i*, *oi*, *ou*, and *u*; and in the English language there are only twenty-six letters, or signs to represent those sounds: hence it is impossible that the same letter can uniformly represent the same sound, and hence arises the endless variations which the letters of the English alphabet are made to undergo, Phonography, by substituting a sign to represent each distinct sound, avoids this confusion. Every sound is invariably represented by the

same sign, or letter; and every sign invariably represents the same sound. All that is required of the learner of Phonography, therefore, in order to become a perfect speller, is to become familiar with the character, by which the different sounds are represented; or, in other words, to learn the Phonographic Alphabet: and then, on hearing a word pronounced, to analyze it into the different simple sounds of which it is composed. Every word is compounded of one or more simple sounds; all the orthography necessary, therefore, is to analyze the word into its different sounds; and write, in their proper order, the different signs representing those sounds. Let us take a few examples. Take the word *though*, which we spell with *six* letters. If we analyze, we find that it has only *two* simple sounds. The first sound is made by placing the tip of the tongue just between the teeth; and for want of any one single letter in the English langnage to represent it, is represented by the two consonants, *th*. The second sound is that which ought to be represented by the letter *o*; that is, if the letter was pronounced as it is in the word *stone*. The word in Phonography, therefore, is represented by two signs, or letters; the first representing the sound of the *th*, the second that of *o*; making the word spell *tho*, the *th* being represented by one character only. It may well be asked here, for what purpose are the letters *ugh* added? There is no necessity for them, so far as the sound of the word is concerned. They are of no use whatever, but to puzzle the learner of the English language. The word *sleigh*, we spell with six letters, yet when we come to analyze it we discover that it has only three simple sounds, the first of which is the hissing sound represented by *s*, the second the liquid sound represented by *l*, and third, the vowel sound of *a*, as in *mate*; Phonography, therefore, discards the *eigh* and writes merely *sla*. The word *rough*, we spell with five, yet when we analyze it we find that it has but *three* simple sounds. The first is the liquid sound of *r*. The second, the stopped vowel sound of *u*, as in *cut*. And the third is the whispered sound of *f*. The Phonagraphic writer, therefore, would simply write *ruf*. And so of every word; writing a sign for every sound and no more. Could any thing be more simple or more easily acquired?

The sounds of which words are composed are called the elements of speech; or, the elementary sounds of the voice; which sounds in Phonograghy are divided into vowels and consonants. The learner must carefully distinguish the sound represented by these terms; both from the signs by which they are represented; and also from the names given to these signs. "It is of the utmost importance," says Andrews and Bogle, in their introduction to their complete Phonographic class book, "that a pupil should break up the habit of regarding a *sound* as identical with the *name of the letter;* and that he should understand that, when we speak of vowels and consonants, we mean *sounds* of the voice, as heard by the ear, without any reference to the characters by which they may be represented, or the names that may be given to such characters.

"A vowel," says the same writers," may be defined to be the smooth or harmonious emission of sounding breath; as *e*, *a*, *ah*, modulated, but obstructed by the organs of speech.

"A consonant is a sound made either by a complete or partial contact of the organs of speech obstructing the sounding breath; in some

degree varying from an entire break or stoppage of it, as *p* in *rap*, *b* in *rob*, &c., to a simple roughness, or aspiration, impressed upon a vowel sound, as *h* in heat, hate."

In an analysis of words it may be somewhat difficult to utter some of the consonants without adding a vowal to them, for the reason that their sound is instantaneous and cannot be prolonged. The impression, however, that a consonant cannot be pronounced alone, without a vowel sound preceding or following it is erroneous. The greater number are even capable of being prolonged, like the vowels. This, for example, is the case with the hissing sound of *s*, which may be lengthened out to any extent, without at all losing its hissing quality. The consonants most difficult to utter by themselves, are those in which the contact of the organs are most perfect and complete; such as those represented by *p*, *d*, and *k*, the first made at the lips; the second at the teeth; and the third at the root of the tongue, near the throat. Also, the corresponding series *b*, *d*, *g* hard, as in give, which, however, are nothing but mere modifications of the form. These series of sounds are denominated *mutes;* as if was intended to intimate that they are destitute of sound; but the fact is, they have a sound, which we hear when we endeavor to pronounce so much of the name *he*, *be; kay*, *&c.*, as is not the vowel: making a sudden crack or explosion of the organs. As this, however, is the province of the teacher of Phonography, and can be interesting only to the student of that beautiful art, in learning to analize, and regard a sign as the representation of a sound, we will drop this part of the subject.

We do not wish to enlarge upon the many difficulties with which a child, in learning the English language, has to contend; but we will state a few facts, which will give some idea of the obstacles to be surmounted.

There are only twenty-six letters in the English language; and those letters have to represent forty-two different sounds. A number of those twenty-six letters must, therefore, have different values, so as to make up the deficiency in number. The letter *a* has nine different sounds; as in the words *imagine*, *mating*, *many*, *having*, *father*, *fat*, *full*, *want*, *dollar*. The letter *v*, has also nine sounds, as in *woman*, *women*, *nor*, *hop*, *work*, *son*, *go*, *do*, *complete*. The combination *eo*, has nine, as in *people*, *leopard*, *dungeon*, *yeoman*, *galleon*, *feod*, *aweola*, *theology*. The English letters and combinations have collectively, says Andrews and Boyle, in the work already alluded to, "no less than the enormous number of *five hundred and fifty-three* different values." Besides the simple sounds in the language, may be represented in many different ways. The sound of *a*, in the word *mate*, in twenty-four ways. The sound of *e*, in the word *he*, is represented twenty-three different ways. And so of many others; making in all an aggregate of *three hundred and fifty* different signs and combinations of signs, to represent the simple sounds of our language. The word *scissors* might be written in any of *one million, seven hundred and forty-five thousand, two hundred and twenty different ways*; and in every case find authority in other words of the language to justify each letter and combination.

Let us now, in fine, sum up some of the many advantages which Phonography possesses over the present system of writing and spelling the English language.

In the first place, it is uniform, simple, and easily acquired. A child eight or ten years old can learn to read it in a week.

2. It is easily applied. No difficulty can be experienced in spelling with unerring certainty any word which can be pronounced; and no doubt will be experienced as to the proper pronunciation of any word which meets the eye. The orthography of words never lead into errors of pronunciation; for every one will spell as exactly as he pronounces; and pronounce exactly as he spells; thereby laying the foundation for a uniform pronunciation.

3. It is legible. No sign represents more than one sound; and no sound is represented by more than one sign, and every single sound is represented by the most simple sign, a letter.

3. It is capable of being written with greater rapidity than any other system. It is asserted by its friends, that a practical Phonographic writer can write *two hundred words in a minute.* In general, public speakers do not average in speaking, more than *one hundred and sixty.*

"If Phonography," says the authors of the "Class Book," already referred to, is not found to possess all these very desirable requests, let the fact be established, and Phonography either rejected or amended." But if it is true to all these conditions of science, as its friends claim that it is—so simple that all classes of persons can easily acquire it; perfectly legible; and capable by practice, of being written faster than people speak in public—then it surely ought not to be rejected as an innovation or treated as a chimera. Every new improvement in machinery—every new discovery in science, is hailed with joy; and why should not this greatest of all discoveries, receive a fair share of public attention, and public patronage?'

In his "Plea for Phonotypy and Phonography," Mr. Ellis says, that "if Phonography was in general use, reading and writing would no longer be thought feats; their attainments being the end and the aim, which the parents of most poor children have in sending them to school. They will take their proper place as subsidiary arts, without which we can learn nothing? but which contain no learning in themselves; they will be universally esteemed as the *beginnings* and not the *ends* of education."

The writer of the foregoing article, believing that the claims of Phonography have not been sufficiently presented to the public, to insure that success which it justly merits, has deemed it proper, through the columns of "*The Western Journal*," to invite public attention to the subject; satisfied that Phonography has only to be understood to be approved and adopted: and to entirely supercede the present system of writing and spelling.

On board ship the Camel kneels on its own accord during heavy seas and rises when the vessel is steady again, unlike the horse, which tires itself out by rolling with the vessel and standing always on its legs. The menagerie conductors never lose an animal in crossing the sea from Egypt to England and from England, to the United States.

The Camels will serve as "chevaux de frise" against cavalry attacks, if need should be, as no horse unacquainted with the sight and noise of those animals dares to approach.

The depredatory Indian tribes would have no longer a shelter in the swiftness of their horses and the bareness of their retreats if hunted down by a corps of "laneer—riflemen" mounted on the renowned Moroccan Dromedaries!

If the Bedouins of Africa, with the Dromedary for auxiliary resisted French soldiers for twenty years, and the Bedouins in Syria, Kurdistan and Arabia the Turkish Nezam's (regulars) for evermore,—how long will the Bedouins of America resist the Anglo Saxon command, on the borders of their new territorial acquisition assisted by this powerful auxiliary—the running Camel, the ship of the desert?

The following is the largest estimate that can be made of the expense of importing one hundred Camels from Morocco to Corpus Christi.

One hundred Camels at an average price of $50 each	$5000
Twenty colored attendants at $15 a month for three months. - - - - - - -	900
Agency for superintending the purchase, the loading and landing of the animals, - - - - -	1000
Travelling expenses, - - - - - - -	600
Freight of attendants and Camels from Morocco to Corpus Christi, - - - - - - -	5000
Insurance 2 per cent, on $17,500 - - - -	350
Food, water and stabling of the Camels from the time of purchasing, - - - - - - -	4000
To the time of landing at Corpus Christi and victuals for the attendants, presents to brokers, merchants and unforeseen expenses, - - - - -	650
Amount brought forward, - - - - - -	$17,500
Allowing for saddles, harnesses, tents, water bags of India-rubber, cordage, blankets, cooking utensils and arms, - - - - - - - - -	2500
The cost of the one hundred Camels at Corpus Christi, ready for a journey, will be - - - - -	$20,000

or $200 a head—not including the very improbable chance of losing some on the voyage, which is already accounted for in the extreme estimate of first cost, freight and expenses in general.

I never have seen a burden Camel sold for more than $50, but I bought some myself in the Red Sea as low as $3 to $5 a head. Running Camels I have seen selling for $20 up to $200!

Admitting only of eighty passengers at $100 a person to San Diego or San Francisco, guaranteeing so by this limited number the uninterrupted journeying with a speed of thirty miles a day, this first trip would only produce $8000, but compensating largely for all expenses

and loss of interests up to a country where such a useful animal is worth at least a $1000!—if it should not be thought proper to employ it in the transportation line between the Sacramento and the Diggins, or to return with fortunate adventurers at $300 a person! either to Missouri, Arkansas or to Texas.

Taking the average weight of a person to be one hundred and fifty pounds, the passengers, baggage, arms and provisions two hundred and fifty pounds, and a reservation of weight for water and food, and victuals for the attendants, one hundred pounds, the burden of the animal for the greater part of the journey will be reduced to about three to four hundred pounds, as it is not always necessary to carry water and food on the journey and as travellers prefer always to follow the Camel on foot during the cooler parts of the day, therefore a thirty miles per diem is a safe average for the whole length of the journey.

Memphis, (Tenn.) EMANUEL WEISS,
A Swiss traveller in Syria and Arabia.

ART. VI.—STE. GENEVIEVE:—ITS EARLY HISTORY.

The ancient town of Ste. Genevieve, is beautifully situated on the west bank of the magnificent Mississippi, about sixty miles below St. Louis. Reposing in beauty amidst the surrounding hills, it presents a most charming view from the river; whilst the interior is delightfully diversified by beautiful streams, which meander through the town, on their way to mingle with the father of waters.

Located in the neighborhood of a rich mining and agricultural country, and abundantly supplied with building materials, Ste. Genevieve possesses more advantages for manufacturing than any other place in south-eastern Missouri.

The commerce of Ste. Genevieve, must also become important. For, besides being the place whence the lead from the rich mines of south-eastern Missouri is shipped, it is now, and must remain the depot and shipping point of the incalculable quantity of Iron produced at the Pilot Knob and Iron Mountain—distant about forty-two miles. Were the contemplated railway from Ste. Genevieve to those vast deposits of Iron completed, and a line of steamboats established between this point and St. Louis, St. Genevieve would, in a few years, become a commercial city of no inconsiderable importance.

The immediate vicinity of Ste. Genevieve abounds in natural wealth: Marble, Limestone, and Sand, exist in vast quantities. The marble is worked with much ease and cheapness; it is well adapted to the manufacture of toomb-stones and monuments; and, is a most beautiful material for building.

The Ste. Genevieve Lime is estimated to be of a very superior

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quality; and a large amount is made here annually, and shipped to the Memphis and New Orleans markets. The Sand, which is of a beautiful dazzling white resembling loaf sugar, is considered the best in the United States, for the manufacture of glass; and large quantities are shipped to Boston and Pittsburgh for the manufactories of those cities.

Possessing so many elements of wealth, and affording so many sources of profitable employment, we may well indulge the thought that the day is not far distant when Ste. Genevieve will have an active, numerous and wealthy population; and become one of the most important manufacturing towns in the State of Missouri.

The present town of Ste. Genevieve was settled by a few French families about the year 1735, previous to "*Lannee des Grands Eaux*," (the year of the great flood.) In consequence of the overflow in 1785, a portion of the inhabitants of Kaskaskia, in Illinois, and of "*Le Vieux Village*, (the old village) of Ste. Genevieve emigrated to this place; and it was not until it received this addition to its population that it assumed the character of a village. The old village of Ste. Genevieve was settled about the year 1735, and was located in what is now called "*Le Grand Champ*," (the big field,) about three miles distant from the present town. Of the old village nothing remains.

Originally, "*Le Grand Champ*," which lies immediately below the town of St. Genevieve, contained 4000 acres of land, all under one fence, and cultivated in common by the inhabitants; but is now diminished in size, caused by the caving in of the banks of the Mississippi. This "*Le Grand Champ*" is one of the most beautiful and fertile bottoms on the face of the globe; and is every year decorated by its rich products, that lie on its surface in magnificent profusion, furnishing most of the necessaries of life to all the inhabitants of St. Genevieve, a great number of whom are cultivators of "*Le Grand Champ*."

The original settlers of the town of Ste. Genevieve, are Joseph Loiselle, Jean Bapt. Maurice, Francois Coleman, Jaques Boyer and Julien Choquet, who had settled here previous to "*Lannee des Grandes Eaux*," (the year of the great waters:) and by Jean Bapt. Valle, Sr., Henri Maurice, Parfait Dufour, Joseph Bequette, Jean Bapt. Thomure and Joseph Govreau, Sr., who came immediately after the Great Flood of the same year, 1785. These persons were all remarkable for their strong constitutions, simplicity of manners, and honesty of purpose; and were endowed naturally, with good minds, but without the advantage of a liberal education. They were free of ostentation and a display of pleasure, except such as were of an innocent character. Their dresses were remarkably plain—they wore heavy striped gingham pants, without the support of suspenders, but fastened by a belt and clasp around the waist, without vest—a blue or colored shirt, a white mackinaw blanket coat, with a capuchon —moccasin shoes, and a blue cotton handkerchief around the head.

The apparel of the early female inhabitants was also very simple. They wore a blue cotton Jupe, which, reaching down to the waist, was fastened by callico strings: their beautiful shoulders and busts were ornamented with a mantlet; their necks decked with a rich madrass handkerchief, and their feet clad in moccasin shoes; whilst their heads were encircled with a blue cotton handkerchief.

The patriarchs of Ste. Genevieve were, by occupation, cultivators of the soil, and voyageurs with barges and keel boats to New Orleans.

They were also traders in European goods which they exchanged for furs, peltries and lead.

These adventurers in their early settlement of Ste. Genevieve, had to encounter many privations, and they passed through the ordeals of many romantic adventures of a savage life; and well they deserve the appellation of pioneers, who felled the forest, and made way for the advance of civilization in the great west of our Union. But they have sunk into their graves and are now no more. But, a few days ago, one of the patriarchs above mentioned could be seen in the town of Ste. Genevieve, leaning on the staff of old age, with ease and grace: his head seemed bleached with nearly one hundred winters. This venerable old man was Jean Bapt. Valle, Sr. His wife, also, lived to an old age, loved and venerated by all. Some years previous to her death, in accordance with an old French custom, she was remarried to her husband, Jean Bapt. Valle, Sr., after half a century of the enjoyments of a married life. It was an imposing and solemn ceremony to see this venerable couple renewing the first vows of their early affection and love, at the hymenial altar.

At an early period, known as "Lannee du coup," (the year of the blow,) the inhabitants of "Le vieux Village de Ste. Genevieve," were called upon to defend St. Louis, which was then threatened to be attacked by the English and different tribes of Indians. Sylvio Francisco Cartabona, a governmental officer, was ordered to Ste. Genevieve by Don Ferdinando Leyba, then Lieutenant Governor of the post of St. Louis, to enlist a company of militiamen for the protection of St. Louis. A company numbering sixty men was raised under the immediate command of Charles Valle, of the post of Ste. Genevieve, which went up in a keel boat, and were stationed at St. Louis; but whilst there the Lt. Governor, Don Ferdinando Leyba, did not furnish them with amunition, which they were mostly destitute of; thus causing much disappointment and mortification to the gallant men, who had left their homes to go and defend their friends in St. Louis. Little did the Ste. Genevieve company think, at the time, that the Lt. Governor was acting in bad faith towards them and the town of St. Louis; but his subsequent conduct fully proved his treachery and placed the Ste. Genevieve company in a false position, as they had partly to obey orders under the despotism of Spain, which was repugnant to their feelings.

Previous to the attack upon St. Louis, an old man named Quenelle, a resident, had crossed the Mississippi river, and went to the mouth of the Kahokia creek, in Illinois, and from what he had seen of the disposition of some Indians, and a notorious out-law named Ducharme, on his return he informed the Lt. Governor, Leyba, that an attack would soon be made; for which he was treated with contempt and sent to prison.

About the time of the attack upon St. Louis, the commandant of the Ste. Genevieve company, seeing that he was deprived of powder, by the Lt. Governor, Don Ferdinando Leyba, sent five men to take three kegs of powder, which an old lady, resident of St. Louis, had, at the time, but did not wish to deliver up, insisting on them not to do her any harm should she persist to give up the powder. They, however, conveyed the powder to head quarters, and the com-

mandant, Charles Valle, seeing the treachery of the Lt. Governor, determined not to obey orders.

Whilst the commandant of St. Genevieve was absent from his head quarters, Leyba ordered the company to march up into a garret and spike their gun; and some of the men had obeyed the order, but as it was about being executed by the whole company, the brave commandant of the St. Genevieve company came up, and at once perceiving the treacherous order, refused, and said, "Que son poste est pres de son canon, et non dans un grenier, et que si l' ennemi viendrait, qu il serait pres a se defendre;" and standing to his post, ordered his men to stand by him, and did all he could, under the circumstances, to aid the citizens of St. Louis, when that post was attacked by the enemy.* It is well known that Lt. Governor Leyba acted in bad faith, and was despised by all the inhabitants of St. Louis and Ste. Genevieve, on account of his treacherous conduct; and feeling conscious of his own foul acts, died shortly after. It was thought that he terminated his own life by poison. After the attack on St. Louis had failed, the company returned to their home, "Le vieux Village de St. Genevieve."

Ste. Genevieve is now made the place of deposit for all the Iron Ore from the Pilot Knob and Iron Mountain, and at this time, more than 3000 tons of the ore lie at Ziegler's Landing, to be shipped to divers cities, but principally to Pittsburgh. Also is here deposited, to be sent to different cities in the United States and to Europe, nearly all the lead, cobalt and copper, made in the neighboring counties in South-East Missouri. Two newspapers are now established in Ste. Genevieve—the Pioneer and the Democrat. The Telegraphic Line,

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*In noticing this attack on St. Louis, at page 78 of the 2d Vol. of the Western Journal, we used the following language: "the inhabitants of the town repelled the attack with spirit and bravery, but the greater part of a company of militia, that had been brought from St. Genevieve to aid in defence of the town, either through fear or treachery, hid themselves in a garret, during the attack—while the Lieutenant Governor, Leyba, who, as it was believed, had been bribed by the British, was guilty of the most open acts of treachery to the citizens."

We made the foregoing statement on the authority, though, perhaps, not in the precise words, of Mr. Primm's anniversary address. Not doubting but that Mr. Primm, and also, the author of the article before us, have both stated the circumstances attending the attack on St. Louis according to their belief in the sources whence they respectively obtained their information, yet, in our estimation, the account of Mr. Rozier appears more consistent with the character and relations of the parties concerned.

It is admitted on all hands that the Lieutenant Governor Leyba, was a traitor; and we must suppose that he had sufficient inducements, from some quarter, for his conduct; but it is difficult to imagine what motives could induce the men of Ste. Genevieve to betray their countrymen and neighbors; especially in a country containing so few civilized inhabitants. Nor, should we admit the suspicion of cowardice, in respect to such men, without very strong proof.

Inhab tants of a small village surrounded by savages; remote from the protection and succour of civilized men; voyageurs on the Mississippi, enured to hardships and dangers; and, withal descended from a gallant race, the men of Ste. Genevieve could scarcely be guilty of cowardice in the defence of a neighboring village of their own countrymen. The treachery of Leyba, a Spanish officer, for whom the inhabitants of Ste. Genevieve could have had but little sympathy, sufficiently accounts, in our opinion, for the conduct of the Ste.Genevieve company. Those hardy pioneers prepared the way for the settlement of this country; they suffered many privations; and it devolves upon us of the present generation, as a sacred duty, to preserve the record of their virtues; and as far as truth will permit rescue their character from every dishonorable imputation. This we owe to them, to the honor of our common country, and to history.

that connects Nashville and St. Louis passes through the town of Ste. Genevieve, and an office is shortly to be put up, which will be of great importance to the commercial men of this place, in transacting their business with the south and eastern cities. Nothing seems more surprising and magic-like than the flashes of intelligence flying with the rapidity of lightning through the old town of Ste. Genevieve.

ART. VII.—PACIFIC RAILWAY.

We have been induced to publish the following plan of constructing a rail way to the Pacific by the suggestion of a correspondent for whose opinions we have great respect, and, who gives it the preference over any that has yet been published. We have no desire to forestall public opinion, but feel constrained to remark that according to our view this plan involves the expenditure of too much private capital. Our reasons on this point will be found at large in the last number of the Western Journal, to which we beg to refer our readers.*

EDITORS.

From the Providence Journal.

ANOTHER PLAN FOR CONSTRUCTING A RAILROAD TO THE PACIFIC.

Now that the public mind is fast approaching the point of decisive action on this important project, suggestions going to give a right direction to such action may be in order. Already we have plans from New York, by Whitney, from Missouri, by Benton, from Massachusetts, by Degrand, and why not one from Rhode Island? Benton would have it entirely a Government work, while Whitney and Degrand would do it wholly by private companies, operating with capital furnished them by Government, assuming a capacity for the application of the means superior to the Government.

Between the two extremes we take our position, fully impressed with the decided advantages to be secured by separating the work into two grand divisions: The first to be carried forward as a Government work, by funds derived from the issue of Government stocks. The second, to be accomplished by an incorporated and responsible company operating with their own capital, and not by that drawn from Government.

Division First, to embrace, Topographical and Geological exploration and survey; Location of line and securing the right of way; The grading of the road, its masonry and bridges; Construction of ample wharves and docks at its terminus on the Pacific.

Second Division, to embrace, Laying the track and completing the

*Vol. 3, page 199.

superstructure; The entire equipment, future maintenance, management and operation of the road, agreeable to the conditions and stipulations of the Government's transfer to the company.

From St. Louis to San Francisco is about 2300 miles. State Governments co-operating with Incorporated Companies in about seventeen years have built in this country more than 5000 miles of Railroad, at an average cost of $24,500 per mile; and is it extravagant to assume that the Government of the United States, co-operating with a strong company, can finish in eight years twenty three hundred miles, at an average of $30,000 per mile? making the total cost of first construction, say seventy millions of dollars. Our plan would divide this expenditure about equally between the Government and the company.

It will be asked, can such a company be formed without injury to the other business interests of the country? We think it can. Let the next Congress meet this project, and by the necessary legislation determine upon the completion of the first division at the earliest day. At the same session let them indicate the terms on which a transfer of the graded line to the right kind of a company would be made. Let those terms be liberal. It would have it in its power to say—"the entire improvements contemplated in the Government Division of the Road shall be transferred and made over to a company that can furnish satisfactory assurance of the fulfillment of its contract for the following considerations, viz: That within six months after the grading is done a locomotive shall traverse the whole line. That the Road shall always be kept in good order, and managed after the model of the best road, and according to the restrictions of the contract. That the company transport forever, free of charge, mails, materials, and men belonging to, or employed in, the service of Government; thus securing between the Atlantic and Pacific States a penny post, and a permanent reduction in the yearly expenses of Govennment fully equal to the interest of its investment. The insecurity inherent in the institutions of Europe, is inducing her capitalists to seek safe and permanent investments in this country, and here would be presented just such a field as they are anxiously looking for, so that instead of an injurious diversion of capital from the channels of the present business of the country, we have secured a great accession to it.

Again, upon the existing Railroads, built at a cost of about $130,000,000, all of which would be directly benefitted by the opening of this, there will result an increase in value of not less than five per cent, making about six millions, which would probably equal the amount of stock taken by capitalists in the Atlantic States.

It is difficult to calculate what amount of stock would be taken by the citizens of the Pacific territories. We know the road to be universally a pet, a favorite project; and it is not improbable that it would become a sort of Savings Bank to the accumulators of gold in those Western mines.

Is it not apparent that Congress would have it in its power to ensure the formation of a right sort of a company by the liberal nature of its terms? And Government could well afford to be liberal; for, let it be remembered, there is no disposal of adjacent lands required on this plan, until after their value has been enhanced by the completion of the work; and it is admitted by all who have examined the subject, that this increase in value, will exceed the whole cost of the road.

Government should send into the field next winter its commissioners, with ample instructions and means to put the entire line under contract at the earliest day. We anticipate the organization of the company within twelve months of that time or before fifty miles of the line are in readiness for the track, when they should begin to operate from the terminus towards the centre, following close upon the forces at work on the Government division, whose supplies would come over the track thus laid. A detachment in the Government service, composed of land surveyors and receivers, under a Commissioner, should keep pace with the progress of the track, in laying out into sections and quarter sections, the fertile lands on either side, extending back some thirty miles, and bringing the same into market. Thus at a very early stage in the progress of our plan would a compensating revenue begin to flow back to the Treasury, constantly increasing with the progress of the work, up to its completion; and exceeding the amount of the Government expenditure from seventy-five to one hundred per cent.

Railroad Engineers will perceive that the line of separation between the two divsions is drawn exactly where, in the progress of railroad building, there is a natural division growing out of a change in the character of the work, and of the operatives who perform it. This being the case, the forces on each could operate at the same time without interference or competition. It is common to let the work of the first division to one class of contractors, and that of the superstructure to another.

There are two elements not sufficiently appreciated by most that enter largely into the cost of this work; they are interest on the cost, and depreciation in the value of the first constructions, before the line is completed and becomes productive.

Twenty-five years are contemplated in the bill reported last winter for carrying on the plan submitted by Whitney. Annual interest on his expenditures will amount to not less than 25,000,000, and he puts depreciation at 15,000,000, making an aggregate loss of 40,000,000; the most of which would be saved if eight instead of twenty-five years were only allowed.

From this it will be seen, that having regard to the strictest economy in expense,we must adopt that plan which secures the most speedy completion.

Why then should a plan any longer divide the public attention that fails to meet the daily increasing wants of our citizens; that has not even economy in construction to recommend it; that furnishes no assurance whatever of securing the object; that is strongly marked with features of a speculative character? And why should another plan be advocated that requires an increase of our national debt of ninety eight million. and a donation from Government besides of half of all the lands adjacent to the Road, when here is a plan that guarantees the completion of the project in the shortest practicable time by the joint efforts of two powerful agencies, each in vigorous operation, for the same result; a plan that, while using some thirty-five million of government funds, creates and enlarges the sources of the national revenue to more than double that amount, a plan that secures a national location, guided by an enlarged view of the wants of the whole country, and not sectional; as would brobably be the case if

given into the hands of northern or southern capitalists? What kind of a location are we sure of on Whitney's plan? Is there no risk where the quality of the land adjacent is to effect the value of the locator's property; than the strict commercial wants of the country will often yield to the latteral attraction of a range of fertile lands or of gold placers?

Our plan not only secures a national location, but the Road is retained just long enough in the hands of Government to be stamped with all the features of a great national work, and is then passed over to the company, who are to perfect and fill up the outline.

Thus we have sought to develope a mode of operations at once simple and comprehensive, devoid of all complexity, by which this great trunk can be constructed, *in the shortest practicable time*, and *at the least expense and trouble to Government, and in the right place.* Here no chance for extended political patronage is given, because Government ceases to have any part in the management of the Road after the grading is completed. TALBOT.

ART. VIII.—PROGRESS OF IMPROVEMENTS IN THE WEST.

The movements which have been going on during the last year in respect to Rail-way, and other improvements, constitute the most interesting feature in the political economy of the times; and, therefore, claim the consideration of all classes of citizens in every part of the country. The agriculturist, the merchant, manufacturer and laborer, are all affected in some degree by these movements, and interested in knowing the extent of their progress. Although much has been said on the subject of Rail-roads, and other improvements in the States bordering on the Mississippi, the movements here have been initiative merely, and but little progress made beyond the meeting of citizens in conventions, and the granting of charters by the State Legislatures. Indeed this seems to be a fatal point in our progress. Generally, the enterprise moves on very well until the charter is obtained, but the difficulties in the way of making the next step are so numerous, that few individuals have courage to encounter them, and the project is consequently abandoned, at least until the coming of better times.

This is the history of the Rail-roads in Missouri, with a few exceptions. And we might here conclude our remarks on the Railroads of this State, were not our labors designed as much for future reference as for present information. As a matter of history, therefore, we shall proceed to give an account of the Rail-road movements in Missouri, for the year 1849, as far as the facts have come to our knowledge.

PROGRESS OF IMPROVEMENT IN MISSOURI.

The Legislature of this State, which convened on the last Monday in December, 1848, granted charters for six Rail-roads.

1. The Palmyra and Mississippi Rail-road. This road, as we learn from the preamble to the charter, had been surveyed, and about thirteen thousand dollars subscribed for its construction—about four thousand of which had been expended previous to its incorporation. We have no definite information in respect to the progress of this work during last year. This is one of the Missouri enterprises, however, that we think will, probably, be carried into effect. The capital stock of this corporation is $30,000, divided into 600 shares of fifty dollars each.

2. The Hannibal and St. Joseph Railroad. A charter was granted for the construction of this road about three years ago. In 1849, the Legislature of Missouri appropriated $5,000 towards defraying the expenses of surveying the route. But as we understand the act, the directors are not authorised to use this appropriation until Congress shall have "donated alternate sections of the public lands, to the extent of six miles upon each side of said contemplated Rail-road from one end to the other." We understand, however, that the citizens interested in this road, have caused a survey to be made by the use of their own means. This shows an earnestness in the cause that authorises the expectation, that if Congress should make the donation asked for by the company, the work will be prosecuted with vigor to its completion.

This is a work of incalculable importance to northern Missouri; and claims in its behalf the support and energies of the inhabitants of an extensive and fertile district.

3. The Missouri and White River Rail-road. This road is to commence "in the town of Independence, in Jackson county, and run from thence to White river, at the most convenient point on said river, at or near the town of Forsythe, in Taney county, where a good terminus for the road can be obtained. We are not aware that any stock has been subscribed, or that any steps have been taken to survey the route. Capital stock $3,000,000.

4. The Alexandria and St. Francesville Road. This road is designed as a connection between Alexandria and St. Francesville, in Clark county. The company have the privilege of making either a Rail or Plank road, as they may deem most to their interest. Capital stock $50,000, divided into shares of $100 each. We have not heard whether any thing has been done towards the prosecution of this work.

5. The Independence and Missouri Rail-road. This road is designed to connect the town of Independence with the Missouri river at Hickman's landing, a distance, we believe, of about three miles. The work was commenced by the citizens of Independence before the charter was obtained, and will, doubtless, be completed in a short time. Capital stock, fifty thousand dollars.

6. The Missouri and Mississippi Rail-Road. This road is to commence at the town of Lexington, in Lafayette county, and pass by the way of Warsaw, in Benton county, to any point in this State, deemed most desirable on the Mississippi river below the mouth of apple creek. Capitol stock, $4,000,000, divided into shares of $100 each. We do not know whether any steps have been taken towards the commencement of this work. The company are required to commence in ten years or forfeit their charter.

7. The Pacific Rail-road. This road is to commence at the city of St. Louis, and, passing through Jefferson city, continue to the western line of the State at some point in Van Buren county, with a view that it may be continued westward to the Pacific Ocean. Capital stock, $10,000,000, divided into shares of $100 each. No act has yet been done by the directors, we believe, under this charter.

8. Carondelet and St. Louis Rail-road. A charter was granted in the year 1837, for the construction of this road, but some alterations were made in it at the last session of the legislature and commissioners appointed to open Books for subscriptions. Books have been opened by the commissioners, but we have no information in respect to the amount of stock taken. Capital stock, one hundred thousand dollars. With the privilege of increasing to one hundred and fifty thousand dollars.

The legislature of 1849, granted a charter to an association of counties and individuals, for the improvement of North Grand river, with a capital of $300,000. It also incorporated a company for the purpose of making a canal from the Mississippi river, commencing at a point near Point Pleasant, in New Madrid county, and terminating near the town of Bloomfield, in Stoddard county. Capitol stock, one hundred thousand dollars—but these works, we believe, like our Rail-roads, have made but little progress.

IMPROVEMENTS IN ILLINOIS.

A great many railway projects have, also, from time to time, been projected in Illinois, and, although the greater part of these, like those of Missouri, stop with the action of the legislature, yet, she is far in advance of us. The Chicago and Galena Rail-way is progressing with a fair prospect of being completed in a reasonable time. This is a work of great importance, not only to Illinois, but to the northern part of Iowa also. The road from Springfield to the Illinois river has recently been repaired and put in a condition for business. We understand, also, that the road which has been so long in contemplation, from Alton to Springfield, will shortly be commenced in earnest. This is an important road, calculated to afford facilities of transportation to a large agricultural district not surpassed in fertility perhaps, by any part of the globe.

IMPROVEMENTS IN INDIANA.

We have desired for some time past to obtain from an intelligent and reliable source, a full account of the progress of improvement in Indiana, and have written to several individuals of that State for information, but have received no response to our enquiries. The Hoosiers are, in some respects, a peculiar people, at least they appear so to their neighbors. They certainly do more and say less about it than any other people we have heard of. We have been examining the newspapers for a long time, with a hope that some one in an unguarded moment had made known what they were doing, but we searched in vain, nor should we now be able to speak of their improvements had not an inquisitive traveller communicated the facts. We publish the article as we find it in the "American Rail-road Journal," if it should contain any errors we trust that some of our intelligent readers in Indiana will correct them.

"The State of Indiana is so little known at the east, and so seldom spoken of in the eastern journals, that the inhabitants say, and with great propriety, that when any person, other than a resident of the State, speaks or writes of the improvements and resources of the west, they make but one stride from Ohio to Illinois or Missouri, and step entirely over the State of Indiana.

Why this should be the case is more than I can understand, for Indiana is at least worthy of notice, even did she not possess within herself resources rapidly developing, that will ere long place her among the first of the internal improvement and manufacturing States.

She is making long and rapid strides in manufactures and agriculture, independent of her rail-roads and canals; and these are advancing with a rapidity that will, I think, astonish even the "go ahead" people of the east. In a short visit recently made to Indianapolis, I was so much surprised at the progress her railroads are making, that I was lead to make some enquiries, and I forward you the results of them, which, should you consider worthy of notice, you will please give a place in your Journal.

The Madison and Indianapolis railroad comes first, as it was the pioneer. The great success of this road has done much towards bringing about the results which we now witness. This road, running from Madison, on the Ohio river, to Indianapolis, the capitol of the State, a distance of 86 miles, has been in operation for many years. It was originally laid with a strap rail, which is now giving place to a heavy H rail of 60 lbs. to the yard. Fifty-six miles of the entire distance are already relaid, and the remainder is fast being completed, and the road is one of the best paying roads in the Union.

2d. The Shelbyville road, running from Edinburgh on the Madison road, to Shelbyville, a distance of 16 miles, is also completed with a strap rail 2-1-2 x 7-8, and is in successful operation.

3d. The Rushville road, branching from the Shelbyville road at the latter place and running to Rushville, a distance of 21 miles, is entirely graded and is fast receiving its superstructure and iron, the latter being a strap rail 2-12x7-8.

4th. The Knightstown road, also branching from the Shelbyville road at Shelbyville, and running to Knightstown, 25 miles, is far addanced towards completion, and is likewise receiving tts iron, a strap rail 2-1-2x7-8.

5th. The Columbus and Bloomington road, which branches from the Madison road at Columbus, and is designed to run to Bloomington, 37 miles west, where it enters the great coal basin of Indiana. A charter for this road is obtained and a sufficient amount subscribed and guaranteed to insure its completion.

6th. The Jeffersonville road commencing at Jeffersonville, on the Ohio river, opposite Louisville, and running north 66 miles to Columbus, where it intersects the Madison road, is far advanced towards completion, and the company are now receiving their iron, a heavy H rail weighing fifty pounds per yard.

7th. The Franklin and Martinsville road, running from the Madison road at the former place, 27 miles west to the latter, is located, and one half is to be let to contractors next month.

8th. The Lawrenceburgh and Greensburg road, running from the Ohio river at Lawrenceburg northerly to Greensburg, a distance of

42 miles, is at present under contract. This road will ultimately be extended about 30 miles from the latter place to intersect the Madison and Indianapolis road between Franklin and Edinburg.

9th. The New Albany road runs from New Albany, on the Ohio river, 5 miles below Jeffersonville and nearly opposite Louisville, to Salem, 35 miles, thence to Bedford, Bloomington, Gosport and Crawfordsville, 120 miles further, where it will intersect the Lafayette and Crawfordsville road. The New Albany road is located and under construction to Bedford, 65 miles, and iron delivered at present to lay 18 miles. This road will be in operation to Salem next spring, and to Bedford next fall or winter.

10th. The Lafayette and Crawfordsville, running from the terminus of the New Albany road at the latter place to the Wabash river at the former place, a distance of 28 miles, is nearly graded and will probably be finished next season.

11th. The Evansville road, commencing at Evansville on the Ohio river, and running to Princeton, 28 miles, is now being located. From Princeton it will probably be extended 28 miles to Vincennes, and from the latter place it will either run to Terre Haute, 65 miles, or direct across to Indianapolis, about 110 miles, and will in all probability as the country becomes settled, diverge at Vincennes and run to both places.

12th. The Terre Haute and Richmond railroad, commencing at Terre Haute on the state line of Illinois, runs from thence to Indianapolis, 72 miles, and from there 73 miles to Richmond on the Ohio state line. The first division of this road from Terre Haute to Indianapolis is entirely located and under construction, and is to be laid with a heavy rail of 60 lbs, to the yard. The second division from Indianapolis to Richmond, will probably be abandoned and the road diverted from Indianapolis direct to Rushville, and thence across to Cincinnati, via Hamilton, 110 miles, or from Indianapolis to Greensburg, and thence to Lawrenceburg and Cincinnati, the distance in either case being about the same.

13th. The Indianapolis and Lafayette road, running from the former to the latter place on the Ohio and Erie Canal and the Wabash river, a distance of 69 miles, is now being constructed, and will be in operation some time next year. It is to be laid with a heavy rail. Upon its completion to Lafayette, it will be extended north to Michigan City, a distance of 90 miles, there to connect with the New Buffalo and Chicago road.

14th. The Indianapolis and Peru road running from the former city to the Ohio and Erie Canal at the latter place, a distance of 76 miles to be laid with a strap rail 2-1-2 × 7-8 is now building, and some portion of it will be in operation next year.

15th. The Indianapolis and Bellefontaine road, passing through Pendleton, Anderson, Munice and Winchester, to the Ohio State line, a distance of 83 miles, is now constructing, to be laid with a heavy rail.

At the State line it will connect with the road of the Bellefontaine and Indiana company, and thence by their road to, and crossing the Cincinnati and Sandusky city road at Bellefontaine, will extend to Gallion, Ohio, where it will intersect the Cleveland and Columbus road, and connect with the Pennsylvania and Ohio road to Pittsburgh.

16th. The Michigan and Ohio road to run from Logansport on the Ohio and Erie canal to Anderson on the Indianapolis and Bellefontaine road; and thence to Newcastle and Knightstown, a distance of about 95 miles, is now about being surveyed—a sufficient amount being subscribed to justify its commencement. At Knightstown it will connect with the Knightstown and Shelbyville road; and thence by that and the Shelbyville road will connect with the Madison road at Edinburg—thus giving another connection between the Wabash valley and the Ohio river. This road will also probably be extended from Knightstown direct to Cincinnati.

17th. A road to run from Fort Wayne on the Ohio and Erie canal, to Muncie on the Indianapolis and Bellefontaine road, about 70 miles, is also under consideration. A charter has been obtained, and, I understand, that the preliminary steps are about being taken to urge it forward.

18th. The Michigan Southern railroad. It is proposed to change the original line of this road, after reaching Cold water in Michigan, by making a detour south from this point, and running through the northern counties of Indiana to the south shore of the Lake. The length of this line in this State cannot be less than one hundred miles. The route has been surveyed, and there is every prospect that the work will be soon commenced. When constructed it will form the most direct line of railway between the south shore of Lake Erie and Chicago.

In addition to her railways, Indiana has also a long line of canal navigation, to wit:

The "Ohio and Erie canal," 100 miles longer than the great Erie canal in New York, and the "White water canal." The former runs from Toledo on Lake Erie, to Evansville on the Ohio river, traversing the entire length of the State. It is already in operation from Toledo to Terra Haute on the Wabash, and is under construction, to be completed in two years from the last named place to Evansville. This canal traverses for a long distance the fertile valley of the Wabash; and cannot fail, from the character of the country through which it passes, to be one of the best paying canals in the Union.

The "White Water canal," running from Hagerstown in Indiana, through Cambridge, Connorsville, Brookville and Harrison to Cincinnati, with a branch to Lawrenceburg, is already in successful operation—comprising, with its branch, a distance of about 86 miles. This improvement will probably soon be extended, by means of a railroad, to some point on the Ohio and Erie canal, at or near Fort Wayne, a distance of about 85 miles.

Truly the State of Indiana is getting on rapidly. Her present prosperity is a wholesome one, and do not fear a repitition of the financial disasters that some few years since overtook her. The enormous amount of railways at present in course of construction and completed—comprising an extent of over 1300 miles—may well astonish a person not familiar with the resources of the State.

But when we consider that Indiana was admitted into the Union as late as 1816, and that she now contains a population of one million, we may cease to wonder.

Her immense coal and iron deposits are also just coming into notice, and are rapidly building up a trade, which will in a short time rival that of almost any other State.

Cotton manufactories are also springing up in various quarters, upon a large scale—caused by the cheapness and abundance of fuel, and the proximity of this fuel to the cotton plantations of the south. The people of the west and south—planters, capitalists and consumers—have at length discovered that it is cheaper to carry the cotton to the coal and provisions, where they are in such close proximity, and with cheap and ready means of communication, than it is to carry both cotton and provisions to an eastern water power, or an English coal field, and then to bring it back again, as manufactured articles, to be sold on the very ground upon which it was raised.

The capitol of Indiana, now a flourishing city of some 8000 inhabitants, and increasing 25 per cent. per annum, in 1821 was a wilderness. This might also be said of the whole State. The forests are disappearing rapidly before the axe of the eastern emigrant; and in their places spring up, as if by magic, fields of grain, that need but be seen to convince the most sceptical that the soil of Indiana is one of the best for agricultural purposes that we have in the Union.

The hardy and energetic population of this State have in them that indomitable perseverance and enterprise of a down-east Yankee that overcomes all obstacles; and the next thing with them, after the timber is cut from the ground, is a railroad to carry the production of this ground to a market, for they appear to be fully impressed with the idea that a market will not come to them.

One great secret of the construction of so large an amount of railway in a new State, is the cheapness with which they can be built. I have been surprised to learn the light cost of roads in this State, and I think I may with safety state that all the new roads now being constructed will not cost on the average $2,000 per mile to grade and bridge them. Some of them cost as low as $1,300 per mile, for their entire length.

The nature of the country, also, is such, with its long and gentle undulating swells, that easy grades and curvatures can be adopted, and they can consequently be worked very cheaply. The great abundance and cheapness of timber for the superstructure and repairs of the tracks, and of fuel for the engines is also of great assistance towards the cheap working of the roads.

The grading of the roads is, much of it, done by the people, through whose land it runs, and pay taken in stock. The timber is furnished by farmers along the line, and pay taken in stock, in fact everything, except the machinery and iron, is made or done in the State; and we may ere long expect to see even the machinery and iron manufactured by her own citizens and in their own State.

Is not Indiana a splendid specimen of the enterprise of the American people? In 1820 a wilderness! In 1850 with 1,000,000 inhabitants, 1300 miles of railway and 500 miles of canals.

Thirty years only to accomplish all this! What may we not expect of her in the next 30 years?

Ere three years have passed away, Indiana will make herself known to the world, if by no other means, by the whistle of her locomotives.

R.

We understand that a large portion of the stock in the Railroads of Indiana is taken by her own citizens and much of it paid for in labor and materials. This is a wise policy. Upon this system of operation,

in a country of productive soil like that of Indiana and other western States, the inhabitants may accomplish any improvement that their reasonable wants may demand, without incurring the embarrassments which usually attend the prosecution of extensive works where stock is paid for with money only. The dividends accruing from improvements made in this way remain in the country where the works are located, and constitute a part of the annual income of the inhabitants instead of being sent away to increase the wealth of other communities.

It is true that, in districts but sparsely settled, works of considerable magnitude cannot be accomplished in this way; but if the current of emigration continues to increase, it will not be long before Illinois, Wisconsin and Iowa will possess both money and labor sufficient to carry out a thorough system of improvement within their respective limits.

IMPROVEMENTS IN IOWA.

Desmoines Improvements.—We are indebted to Col. S. R. Curtis, chief Engineer on the Desmoines improvement, for his report containing estimates of the cost of that work from the mouth of the river to the Raccoon forks, a distance of 183 1-2 miles by the line of improvement. The entire cost is estimated at $1,191,907,31, and the quantity of land appropriated by Congress to the construction of the work is estimated at 1,233,800 acres.

In his report the Engineer says "we have under contract and in successful progress all the work necessary to carry slackwater navigation from the mouth of the Nassau Slough up to Keosauqua; a distance by the meanders of the river, of 50 miles, and by the line of improvement (the ten miles of canal cutting off 2 1-2 miles,) forty-seven and one half miles. Enough to show the character of the work, and enough to overcome some of the worst obstacles to the present navigation of the river. All this work can be completed next season, and I confidently rely on its being open for navigation in the spring of 1851."

The following extract from the Engineers report will impart to our readers in other States, a better idea of the utility and importance of the Desmoines improvement than anything we have seen published on the subject.

Having disposed of the survey and estimates the Engineer proceeds with the following interesting account of the work.

"The crest of the dam which turns the water into Coal Bank canal, is projected 309 79-100 feet above the water in the Mississippi river. The pool of the upper dam is 6 68-100 miles long, which carries us to Raccoon Fork. Allowing for the inclination of this upper pool three-tenths of a foot per mile, the water would be raised at the forks (Fort Desmoines,) 3 feet above the level of December 22, 1848; and, therefore, give from 4 to 5 feet in the two branches at Raccoon Fork.

I have thus detailed all the various works which I recommend as a combined series sufficient to secure slack water navigation "from the mouth of the Desmoines river to Raccoon Fork." The distance by the meanders of the river is two hundred and four miles and sixty-eight hundredths, and by the line of the improvement as designated by the blue line on the map, one hundred and eighty-three miles and

sixty-eight hundredths; showing a saving in distance by all the canals of twenty-one miles. Including the canal now nearly finished at the lower end of the improvement, we have proposed eight canals; the aggregate length of all being 27 miles.

There are 28 dams, and two intermediate locks on canals; making 30 locks on the line of improvement. All the canals are carefully located, and the centre cut or fill marked on stakes driven every hundred feet. The estimates have been made at higher rates than the average contract prices of the lower or first letting, because I apprehend an increase of the price of labor and provisions as the work progresses. I have given the items of the work at each point, so that prices may be tested by persons residing in the vicinity, and are familiar with the cost of stone, timber, &c.

In determining quantities, I have taken centre cuttings every hundred feet in the canal lines, and made allowances for greater quantities where the ground required on the side cuts. The material in the dams, has been determined by the application of the plan of crib dams with perpendicular *tumbles* applied to each particular location. As all the dams are on rock, I consider this plan (a drawing of which is here submitted,) entirely sufficient. There will be repairs needed frequently on any crib dam, but this plan is much stronger than those now erected for mills on the river, the highest of which (that at Thomas') has a lift of 7 feet, and stands very well. The lock walls are calculated for heights to admit navigation through them at high water; so that at low water, when the lift is greatest and the pressure most powerful; we have a superincumbent wall to aid in support of this pressure. Without taking into account this superincumbent wall, I have estimated the thickness of the masonry sufficient to resist the pressure of the greatest head that can occur when a pool below the lock is drawn off, so as to withdraw the influence of back water. By applying these principles I have estimated the average thickness of the walls at from 6 to 10 feet, and this average is to be so disposed of, as to increase the mass of masonry where the quoin post and other causes increase the pressure; and diminish the mass where the pool of the dam or other causes remove the pressure. I name this, because it is easy to augment the cost of a contract by increasing the amount of material; and it by no means follows that you increase the strength of work as you add to the material. A bridge, for instance, may be broken down by needless weight of timber, and a dam may be weakened by an increase of buoyancy and additional leverage by addition to the length of timbers. States loose thousands, yes millions, by needless waste of material, and it is here that ignorance can lavish and intelligence save the means applicable to this improvement. Engineering is a proximate science, but it constantly finds application of fixed sciences, which, properly understood and directed, secure the greatest economy in the work. It is the quantity more than the price that augments the cost, and it is in the use and calculations of quantities that States and Companies should fear the greatest loss. Few are competent to determine losses occasioned by errors in plan, and errors in the execution of plans; so that few can perceive the economy of science, when they do not understand the loss of wasteful experiments. I have estimated the *value* of the work of the Desmoines River Improvement as I think, liberally; its *cost* depends on

the management of the work. A cash letting, I have no doubt, could now be made below my estimate, but some items will always be suggested in the progress of a work which cannot be anticipated. If the Board had the available means to apply to the work, there are many important reasons in favor of its immediate construction. Provisions are cheap, and labor can be procured low. Material is also cheap, and other improvements have not been made, so as to require a large item to be set down for private damages. The settlement of the country would be accelerated by its early construction, and the work would secure a precedence which would be of great advantage in view of other works that are contemplated and certain to be made.

When completed according to the plan here proposed, it will be seen, that by the improvement the distance from the mouth to the Raccoon Forks, will be in round numbers one hundred and eighty-three and a half miles. The mouth of the river according to M. Nicolett is in N. Latitude 40° 21' and 43"—and in Longitude 91° 32' 30'. The Raccoon Forks are in Latitude 41° 34' 44"—and Longitude 93° 37' 7". These observations show that Fort Desmoines is 124 1-2 miles West, and 73 miles North of the mouth of the Desmoines; and the straight line from the mouth to Raccoon Forks is therefore 144 miles; which determines the difference between the straight line and the line of our improvement, to be 39 miles. The road generally travelled varies almost the same, and a rail road which may be located on the ridge parallel to the river, would not save much in the distance, compared with the river improvement. Steamboats pass the improved locks on the Kentucky river, Monongahela and Muskingum in less than eight minutes, the time therefore required for passing 30 locks on the Desmoines Improvement may be safely put down at 300 minutes, or 4 1-2 hours. Boats can run on the pools faster than they can on the Mississippi, and therefore I think at the rate of 15 miles an hour, which for the whole distance of pools and canals would be less than 13 hours; add two-thirds of an hour for casualties and you have my estimate of the time required for packet boats to pass from the mouth to the Forks—18 hours. Lockage time on such an improvement, is not lost time; because landing passengers and freight can always proceed during the same time, and business will assume such a form as to apply every moment of the lockage time to the business of commerce. The time therefore which will be required to pass this improvement, will be sufficiently reduced to compete with stage travel by the road, and the business and travel of the Upper Desmoines country will justify the employment of a line of packet boats between St. Louis and Fort Desmoines, as soon as the improvement can be completed. Steamboats of 500 tons burthen run on the Muskingum improvement where the locks are much smaller than those we are constructing on the Desmoines. Transportation of freight will therefore be cheaper, even if it is made to pay the same exorbitant tolls.

Without going into details of comparison, I estimate the freight on a barrel of flour from Raccoon Forks to the mouth of the Desmoines, at 25 cents a barrel, and on wheat 8 cents a bushel. Much depends on the amount of toll required to pay for work and keep up the improvement; and I make my estimate by comparing it with what it costs on public works of this kind elsewhere. By flat boats it would

cost about one half this sum, *i.e.*, 12 1-2 cents a barrel for flour, and 4 cents a bushel for wheat.

In time, and expense, and certainty; the plan of the Desmoines Improvement will compare favorably with any improvement in any State, and the more I consider the country which is likely to contribute to its commerce, the more certain I am of its great importance.

Let us suppose all the commerce within ten miles of the Mississippi will be hauled into Keokuk on wagons, and suppose ten miles from the lower end we appropriate only the business within 5 miles, and say ten miles back from the Mississippi, the improvement will carry off the surplus within 5 miles on each side. Go up to Raccoon Forks, and it is certainly fair to say this improvement, with its milling and manufacturing power and other inducements, will draw in the trade within 60 miles of Raccoon Fork. Indeed at 60 miles distance, there is no prospect of a rival to the Desmoines Improvement, and reference to the map will show that such is the distance to the Missouri, Mississippi and all other streams from Fort Desmoines; that we cannot doubt the reasonable prospect of this point being the centre of business for a country one hundred miles West and North West of it. But assuming 60 miles, and it now commands "this extent," we have a surface ten miles wide at the East end, 120 miles wide at the Forks, and, without counting anything for ten miles nearest the Mississippi, 134 miles long. To this area must then be added a semi-circle with 60 miles radius, which lies West of Fort Desmoines; which being computed gives for the surface drained by the Desmoines Improvement, 14,364 square miles, or 9,092,960 acres of land.

This is what I consider the country immediately attached and tributary to this river. There is a vast country North-west of Fort Desmoines, the *Cocteau des Prairies*, which will send a portion of its products down the upper branch of the Desmoines. The Desmoines is longer above Fort Desmoines, than below. It rises, according to M. Nicolett, in the *Shetek* lakes, latitude 44 degrees to 3'—Longitude 90 degrees 1' 30"; a point 138 miles North and 144 West, and, therefore, in a straight line 200 miles from Fort Desmoines. Some improvement will be made to secure an outlet for the products of this country, and the most natural one will be by the valley itself, which, according to M. Nicolett, is peculiarly adapted to water navigation. He says, "the hydrographical relations of the Desmoines, with the Mankato, St. Peters and Mississippi rivers, present a geographical incident of some interest. By referring to the map in latitude 43 degree 45'—Longitude 95 degree 12', (a point 161 miles above Fort Desmoines,) it will be seen that there is a lake very near the Desmoines named *Tchan Sketcha*, or Dry Wood lake: The Wutanwau river which is a tributary to the Mankato, that empties itself into the St. Peters, has its source in this lake. Now the tongue of land separating the Desmoines from *Tchan Sketcha* lake, is not more than a mile to a mile and a half broad, so that, were a canal cut across, the waters of the Desmoines would be made to communicate with those of the St. Peters." This not only shows that others have conceived the idea of improvement of the river above the Raccoon Forks; but the Shetek lakes and the connection with the St. Peters are, indeed, extraordinary incidents in favor of such an improvement. I have before also alluded to the proximity of the western terminus of the

Desmoines Improvent to the valley of the Nebraska; and here reiterate the probability of a connection with that valley, which will draw in a share of the trade and travel of the far West. But excluding the advantages which we may derive from extended works, and confining ourselves to the surface I have suggested as the legitimate field which is destined to produce a commerce for this river, and the importance of the work is enough to command the united energies of the whole State. The county of Wayne in the State of Ohio, produced in 1840, according to the census of that year; 1,763,741 bushels of the various cerial grains, wheat, corn, rye, &c. It now no doubt produces more than 2,000,000 of bushels. The Desmoines country that I have here been considering, is decidedly richer and more capable of producing these grains than the county of Wayne; but taking this as a unit, then the area drained by our improvement would, with the same culture, produce 42,000,000 of bushels. This is only one item, to which may be added the wool, potatoes, hay, apples, manufactured articles; to say nothing of the coal, and other mineral products that will swell the annual wealth of the country and enlarge the commerce of the river. Settlements are now rapidly extending over all parts of this area, and such is the ease of preparing and cultivating the soil, that I hazard the opinion that ten years of labor in this section of country, will do no more towards perfecting a farming district, than can be effected by 40 years of the same amount of labor applied to a heavy timbered country like the county of Wayne. Counties on the Desmoines which commenced their settlements five years since, now send off a large surplus of cerial grains, besides a greater surplus of horses, beef cattle and hogs. These considerations demonstrate, that we cannot easily over estimate the products of this country or too soon prepare a market for its accumulating surplus.

An important item of commerce on this river will be derived from the mineral products of the valley to which I have before alluded. Stone coal appears to increase in quantity and quality as we proceed up the Desmoins. It is found in many places in bluff banks where it can be wheeled directly from the mine into the boat; and we may form some idea of the convenience of mining from the fact that with the imperfect arrangements now adopted, it is delivered at the mouth of the coal bank at Fort Desmoinse, at 2 1-2 cents per bushel. This is the bank belonging to Mr. Vaux, and I suppose is no more than a fair specimen, since I found the strata of coal in different places to vary from 2 to 8 feet in thickness, and this stratum at the Forks is about 5 feet thick.

As this Desmoines coal field is the farthest West, it is of great importance to the Mississippi valley, and it will be matter of interest connected with the proposed railroad to the Pacific, since this valley will probably offer the nearest and most convenient fuel to supply the destitute country west of the Missouri river.

Gypsum (Plaster of Paris) is found near Fort Desmoines in large cliffs of inexhaustible masses, and at present prices in St. Louis, it would be a profitable article of commerce if the improvement were completed. The magnesian lime stone, and the white, red and yellow sand stone which prevail in great abundance along the entire length of the improvement, are so excellent and easily prepared for building purposes, that they will also some day be carried to towns on the

Mississippi. The rough and rock head lands near the mouth, at "Cowpen's old mill," at "Raven Cliff," "Elk Bluff," and the beautiful mountain of "Red Rock,"—all noted land marks that have stood for ages as silent and gloomy sentinels, guarding the clear bright river that flows at their base—will be rent by the blast and broken by the workmen; and their fragments will be removed and erected into mansions which will adorn the citses on the Mississippi, and the valleys and hills of the surrounding country.

ART.—IX. COMMERCIAL LAW.

IMPORTANT DECISION TO COMMISSION MERCHANTS.

The New York Journal of Commerce reports the following important decision lately in the Supreme Court of that city. It but affirms old principles of law, but principles very important to be observed by commission merchants.

Courts, Tuesday—Superior Court.—Before Judge Sanford—Isaac Milbank et als. vs. Alexander Denniston and others. Action to recover from defendants a loss sustained on the sale of flour, caused, as plaintiffs alleged, by the defendants to whom the flour was consigned having sold it at an improper period, and *contrary to the owner's instructions.* The plaintiffs are merchants in the city, and the defendants are members of a house doing business here and at Liverpool. In the month of June, 1846, the plaintiffs advised the branch of the house in Liverpool that they were about to consign two parcels of wheat to them, one of 500 barrels, by the Ship Nicholas Biddle, and another of 400 barrels by the Georgiana. In their letter so informing the defendants, dated the 25th of June, 1846, they said to them:

"You will please make no disposition until we give our wishes, per Caledonia, unless 22 shilling, in bond, be obtainable, in which case, if in your judgement you deem it our interest." On the 27th of June the plaintiffs wrote another letter to the defendants, in which they referred to the expected passage of the corn law in England, and its probable effect on the market, by admitting for sale a large quantity of corn, then in bond, and said: "We fear that the first introduction, for sale, may tend to lower prices. But that after stocks now in bond shall be reduced by consumption, &c., an improvement may ensue. We would, therefore, express our desire that these parcels may be withheld from the market until the operation of the new law shall have produced its result; though if 22s. in bond be obtainable, and you think our interest dictates such sale, please so dispose of it."

The Nicholas Biddle arrived at Liverpool on the 18th of July, nearly

at the same time that the defendants received the above letters. They caused the above wheat, which she brought, to be put in store, and on the 23d of August, wrote to the defendants in relation to it, saying that whether the wheat was sour or not, they feared it must be sold soon on account of its coming from New Orleans. In this letter they gave intimation of of their intention to sell it immediately. But on the 4th, 5th and 7th of August they did sell it, at 21s per barrel; and when they informed the plaintiffs of having done so, the latter expressed dissatisfaction at the defendants having acted contrary to their instructions.

For the defence, it was contended that the defendants had acted in conformity with their instructions; that the corn law had passed on the 26th of June, and that there was full time to ascertain the effect of its operation in August, when the flour was sold. It was also attempted to be shown that the then prospect of the coming harvest indicated that no higher price would probably be obtained for the flour if the defendant held it over. In reply to this, however, it was shown that about the time the flour was sold, or very shortly after, it was known that the potatoe crop in Ireland had failed.

The wheat, per the Georgiana, did not arrive in Liverpool until the middle of August, and this parcel the defendants held over until the beginning of October, when they obtained 29s. 9d. for it. The plaintiffs now allege that had the defendants held over the first parcel, as they did the second, in accordance with instructions, it would have brought the same price; and that by the defendants not doing so, the plaintiffs lost the difference between the two prices, for which they now claimed compensation. The plaintiffs also contended that independent of these instructions, the defendants had rendered themselves responsible by an undue want of diligence and skill in selling the wheat at the time they did.

The court charged the jury: This case was of great importance to the parties concerned, and which ever way the verdict might be, it must occasion a great loss. The court then detailed the facts of the case, and said that the plaintiffs claimed to recover on two grounds.—First—that they gave instructions which the defendants were bound to obey, and that in consequence of their not doing so, the plaintiffs sustained a great loss on the wheat sent by the Nicholas Biddle. The other ground is, that the defendants, irrespective of the instructions they received, did not, in the sales made in August, exercise that reasonable skill which they were bound to do. In the plaintiffs letters of June 25th and 27th, they instructed the defendants that the flour should not be sold until the operation of the corn law was known unless 22 shillings were got for it, and that the defendants thought it for the plaintiffs interest to sell it. These amounted to specific instructions, which the defendants were without any doubt bound to obey, although they had made advances concurrent with those instructions.

The first question for the jury was, did they obey those instructions? Were the sales made on the 4th, 5th and 7th of August, made before the operations of the corn law could be ascertained? This was a question which we are perhaps not as competent to decide as would be a jury in Liverpool, but we must decide on it from the best lights we have. It appears that the passage of this corn law had been long agitated, its passage was expected, and it did become a law on

the 26th of June. The defendants knew that a vast accumulation of bread stuffs were in bond, anterior to the passage of this act, and supposed that the passage of the corn law must throw a large amount of bread stuffs on the market and that prices must be depressed. Was then the opening of the ports of Great Britain the result which the parties contemplated in giving their instructions, or did they contemplate as a result of the corn law that, although the admission of large stocks to the market would depress prices, yet its ultimate effect, from creating an enlarged consumption, would cause prices to rally, and enhance the value of their wheat?

It was for the jury to determine in what view the defendants were bound to understand it. The defendants say they were to hold the property until the results of the corn law were known, and that they were known on the 4th of August, and that its effects were to reduce bread stuffs to a low price; and that the result being known, the plaintiffs meant they should make sale. It was for the jury to say, were the defendants as men possessed of reasonable skill in their business, warranted to think that these instructions mean a sale, on ascertaining the results of the corn law, no matter what might be the effects on the market.

If the defendants were warranted in so understanding their instructions, then they were justified in making the sale, and were not liable for any loss accruing to the plaintiffs. But if they were not warranted in so understanding their instructions, then they were responsible. There was no doubt that the defendants acted in good faith, which is shown by their own sales at the same time. But they were also bound to act with skill and diligence.

The jury would determine whether the defendants had disobeyed their instructions, or were they deficient in skill or diligence. In either of those cases they were responsible; but if they had not disobeyed their instructions, and acted with skill and diligence, then they were not liable.

Verdict for plaintiffs $11,136 37, being the amount claimed.

LEIN ON STEAMBOATS.

The New Albany Bulletin gives the following account of a decision, which was rendered last week by the Circuit Court of Floyd county, sitting in that city:

"The steamer Iroquois had been built and furnished at this point, the material and labor being furnished upon a credit by our mechanics; they of course retained a lien upon the boat for the value of thrir services and material. They were induced, however, to take accepted bills of exchange, which were dishonored. The boat was then seized under our Watercraft law. The Court has decided that the creditors by receiving the accepted bills of exchange, waived their lien and are without their remedy against the boat."

COMMERCIAL STATISTICS.—COMMERCE OF ST. LOUIS.

We have found, heretofore, so much difficulty in collecting and arranging the commercial statistics of St. Louis, that, we have, in making our statements in respect to the commerce of 1849, relied upon the labors of others. The following tables have been taken from the St. Louis Republican, and are, doubtless, as near the truth as they can be made in the present condition of our commerce. EDITORS.

FROM THE ST. LOUIS REPUBLICAN.

Below we annex a Table of Imports comprising nearly all the important, and many of the minor articles of Produce, Groceries, and Merchandize, received by the River, during the past year. This table we have compiled with due care and much labor, and from the most reliable sources of information. It will, no doubt, prove acceptable to all who take interest in statistical compilations, and particularly to those who feel interested in the growth and prosperity of our city. By reference to this table it will be seen that the receipts of many articles, viz: Lead, Hemp, Wheat, Corn, Flour, Barley, &c., were not so great in the year 1849 as the year previous, and on the other hand the imports of Provisions, Tobacco, Bale Rope, Hides, and other important articles, increase in a corresponding degree thereby, rendering the value of our agricultural imports nearly equal for the two years past.

As regards the Exports of Produce or Merchandize, we are possessed of no data that would give an insight into this important branch of the the trade.

IMPORTS OF PRODUCE &c. FOR EACH MONTH OF THE YEAR 1849.

ARTICLES.		January	February	March	April	May	June	July	August	September	October	November	December	Total
Apples	bbls.	556	641	3,372	1,416	619	140		219	204	2,235	9,045	2,136	20,583
Ale and Malt Liquors	bbls & hf bbls.	135	201	714	605	542	65	201	212	317	620	427	422	4,461
Bacon	hhds and casks.	46	260	2,961	5,723	3,647	633	779	1,040	1,010	232	294	255	16,880
Bacon	bbls and boxes.		27	251	1,531	428	113	137	603	98	32	11	14	3,245
Bacon	bulk pieces.		419	1,587	3,431	1,543	457	1,371	890	380	172	37		10,287
Beef	hhds and tierces.	9	179	1,259	751	259	451		491	173	3,065	4,287	355	10,687
Beef	bbls.	86	792	1,671	872	359	219			49	1,416	2,496	4,376	12,336
Butter	bbls.	80	162	270	461	181	111	124	82	203	94	414	142	2,324
Butter	firkins, kegs and jars.	168	182	610	952	1,277	359	218	335	976	1,000	1,090	644	7,811
Beans	bbls.	15	33	333	501	275	87	26	37	32	128	27	17	1,516
Beans	sacks.		12	143	732	346	119	150	12	14	327	218	192	2,265

TABLE OF IMPORTS—(*Continued.*)

Bagging	pieces.				197	154	56	95	35	115	253	122	52	1,079
Bale Rope, Hemp	coils.		185	1,947	1,755	1,269	1,155	1,452	1,954	5,004	1,892	1,769	574	19,065
Beeswax	packages.		13	266	183	100	24	17	28	47	69	87	19	853
Bran, Shorts, &c	sacks.		1,248	1,387	1,591	5,092	2,981	4,416	10,743	20,473	10,464	3,932	8,151	65,418
Brooms, straw	dozen.	248	662	1,182	1,624	985	217	537	862	572	414	2,432	1,288	11,023
B. W. Flour	bbls. hf's and sacks.	16	42	132	152	114	18				318	612	388	1,792
Buffalo Robes	packs.			37		21	69	2,499	627	1,215	17			5,585
Buffalo Robes	loose.					1,109	260	2,111			115			3,595
Barley	bushels.	24	622	9,110	11,361	4,160	1,446	314	928	5,604	14,502	43,416	976	92,463
Corn ,shelled	bushels.	4,390	9,678	33,648	41,603	32,244	25,488	30,044	33,244	28,480	15,924	20,878	10,812	287,433
Corn in ears	bushels.		1,500	2,250	1,000	1,800	500	2,300	900	2,500	3,200	1,250	700	17,900
Corn Meal	bbls and sacks.	39	79	128	266	89		116	45		174	81	60	1,077
Cider	bbls.	58	315	707	186	164	45	5	85	194	439	398	43	2,639
Cheese	casks and boxes.	406	633	1,496	1,207	611	127	138	203	2,033	5,937	3,620	2,993	19,464
Castor Oil	bbls.	46	83	69	41	63	9	72	11	75	265	85	56	875
Cotton	bales.		31	130	85	25			95	60	190	20	229	865
Cotton Yarns	bales and packages.	402	3,417	2,161	1,487	2,117	1,514	910	120	875	3,895	4,116	1,822	22,836
Candles	boxes.	40	590	718	505	440	200	365	50	128	750	2,460	1,125	7,361
Cranberries	bbls and boxes.		29	10	29	31				44	1,962	2,245	11	4,361
Castor Beans	bbls and sacks.		152	109	243	165	385			637	1 411	991	1,372	5,465
Copper	pigs.				31		47			35	101			214
Crackers	bbls.			100	125	75		35	20	45	120	40	29	689
Coffee	sacks.	3,612	10,719	6099	4,780	6,347	2,097	4,021	8,516	9,850	3,200	4,593	4,519	57,353
Dried Frait	bbls.	140	1,154	2,044	1,369	222	136	170	51	122	392	398	278	6,476
Dried Fruit	sacks.	322	2,230	4,627	2,211	1,412	289	163	234	469	1,563	3,934	1,311	18,765
Eggs	bbls and boxes.	21	53	273	435	135	79	80	70	98	158	232	94	1,737
Flour	bbls.	3,619	4,933	31,780	23,713	20,389	18,327	12,230	26,528	54,177	52,049	31,205	22,462	306,412
Furs	bales and packs.	11	41	147	430	268	54	155	241	122	20	11	24	1,524
Feathers	bales and sacks.	21	28	141	97	40	10	15	102	215	261	143	83	1,156
Flaxseed	bbls and sacks.	17	54	2,231	2,853	1,755	126	180	271	212	784	1,132	187	9,802
Glass	boxes and half boxes.	1,593	10,429	9,574	4,212	3,697	955	2,784	1,422	4,318	5,682	11,465	10,505	66,696
Ginseng	bbls and sacks.	14	39	22	102	81		14	5	41	19	28	9	374
Grease	bbls and casks.	81	207	306	226	131	49			24	117	128	225	1,494
Gunnies	bales and bundles.	398	184	673	341	211	15	287	309	784	211	413	657	4,403

TABLE OF IMPORTS—(*Continued.*)

Hides	dry and green.	238	760	12,790	14,528	8,998	2,145	1,907	3,261	3,830	3,928	11,468	4,999	64,902
Hemp	bales.		138	2,204	11,204	9,917	3,414	2,365	6,462	7,108	2,304	851	233	46,290
Hops	bales.	134	126	27	45	72	14			54	165	120	26	783
Hay	bales.	64	295	800	748	476	102	554	1,346	1,177	1,350	2,584	1,120	10,616
Iron, pig	tons.	216	248	484	440	435	135	315	473	131	210	1,309	657	5,143
Lead	pigs.		2,251	41,047	78,563	64,390	37,106	58,656	64,480	53,211	86,655	85,335	18,599	590,293
Lard	tierces.	430	1,003	6,040	2,587	856	127	58		219	338	1,649	2,494	15,801
Lard	bbls.	2,137	4,066	26,334	10,703	2,191	336	274	1,290	995	833	2,466	6,651	58,279
Lard	kegs.	1,292	1,928	4,102	3,662	1,227	316	522	358	1,121	518	633	3,171	18,845
Leather	boxes and bundles.	233	276	1,517	904	973	110	318	179	316	212	319	911	6,268
Lemons	boxes.	601	1,339	1,136	1,522	121				116	315	1,675	288	8,413
Linseed Oil	bbls.	25	317	235	180	101	45	62	15	147	248	262	297	1,936
Molasses	bbls.	352	3,156	5,327	4,635	3,007	2,899	1,023	853	1,883	1,393	2,247	2,439	29,214
Moss	bales.	93	38	74	181	212	34			72	217	69	28	1,018
Malt	bbls and sacks.			164	296	126					100	204		890
Mackerel	bbls.	240	587	738	856	467	108	184	55	398	1,195	988	621	6,467
Mackerel	half bbls and kitts.	129	397	449	532	281	304	79		218	782	314	173	3,658
Nails	kegs	2,073	12,766	9,673	5,862	3,422	2,705	1,050	1,420	4,212	18,459	9,162	7,763	76,567
Oats	bushels.	2,574	5,846	9,130	28,676	12,728	10,350	17,564	49,480	36,034	38,049	34,412	7,448	252,991
Onions	bbls.			81	130	87			116	112	491	113		1,136
Onions	sacks.			232	299	279	487		44	1,637	1,868	2,546	52	7,404
Oranges	boxes.	210	1,475	1,697	842	526	100				52	211	91	5,207
Oils assorted	bbls.	131	190	282	304	214	39	105	52	421	527	238	145	2,648
Oakum	bales.	167	339	260	409	116	14	210	43	196	210	192	38	2,594
Pickled Hams & Sh'lders	csks & bbls.	162	1,445	4,045	2,639	924					38	142	1,169	10,564
Paper	bundles.	1,276	3,702	5,767	3,796	2,879	3,874	4,211	1,837	3,896	14,796	8,212	3,036	57,282
Powder	kegs.	1,375	827	510	1,049	900	125	100	1,000	640	1,400	900	1,872	10,698
Potatoes	bbls and sacks.	209	1,249	3,468	9,638	4,745	143	189	38	5,876	6,858	7,935	474	41,222
Pork	bbls.	5,886	9,624	39,687	22,052	5,167	996	1,677	3,709	896	1,577	4,176	18,415	113,862
Pork	boxes.	100	639	960	612							96		2,407
Pork, in bulk	pieces.	1,863	22,506	262,029	186,410	1,598	457				720	1,224	5,869	482,676
Pork, in bulk	lbs.		55,000	374,000	145,200	21,400							160,000	755,600
Peltries skins, &c.	bales.	18	292	583	824	447	118	36	15	41	29	143	95	2641

TABLE OF IMPORTS—(*Continued.*)

Pitch	bbls.		25	120	95	100		40	21	35	71	212	117	836
Rice	casks.	57	153	378	172	223	20	23	70	210	214	290	155	1,965
Rosin	bbls.			100	360	416		68	21	185	150	112	407	1,819
Raisins	boxes and half boxes.	8,688	2,819	1,116	773	1,187	400			974	562	2,422	2,114	16,155
Rye	bushels.	30	82	561	1,122	867	476	132	404	362	690	772	346	5,844
Salt	bbls.	364	744	1,419	2,136	1,112	3,339	778			2,096	80,63	3,592	23,553
Salt	sacks.	3,016	18,893	11,080	31,412	21,735	14,683	40,636	20,066	28,416	21,180	47,270	23,322	291,709
Sugar	hhds.	422	1,945	5,602	4,352	2,445	582	403	1,400	1,263	3,595	1,527	4,085	26,501
Sugar	boxes and bbls.	86	133	1,415	1,132	1,749	239	145	753	291	241	132	1,030	7,348
Soap	boxes.		730	955	682	500	160	75	600	181	500	825	460	5,668
Saleratus	casks and bbls.	44	205	365	180	218	37	10	58	116	92	72	36	1,438
Tobacco, leaf	hhds.	1		118	432	1,637	889	1,566	2,137	2,301	571	199	28	9,879
Tobacco, manufactured	boxes.	86	722	1,535	714	419	265	160	490	117	241	597	558	5,904
Tobacco, Havana	bales.		304	300	260	60		40	100	10	200	42	227	1,543
Tallow	casks and hhds.	17	62	119	111	82	12		39	41	140	263	87	973
Tallow	bbls.	40	78	130	123	32	7			18	62	104	37	631
Tar	bbls.		90	513	150		20	207		125	352	668	414	2,539
Tar	kegs.			403	380	150		374	140	911	200	395	1,150	4,103
Turpentine	bbls.	126	380	312	423	145		85		110	80	124	150	1,935
Vinegar	bbls.		43	175	215	74	50	141		314	102	15	294	1,423
Wool	bales.	4	15	17	87	37	140	252	234	182	174	86	46	1,274
Whisky	bbls.	547	1,268	5,185	4,974	2,848	1,327	1,915	1,807	2,652	2,765	2,626	1,171	29,085
Wheat	bushels.	7,518	16,782	201,814	189,648	95,634	79,802	65,344	171,826	305,475	255,197	331,528	71,967	1,792,535

Estimated value of thirty-one of the leading articles of Produce received at the port of St. Louis, for the years 1848 *and* 1849, *commencing on the* 1*st of January and ending on the* 31*st of December, with total valuation.*

	1849.				1848.			
ARTICLES.	Aggregate Amount.	Average Rate.		Estimated Value.	Aggregate Amount.	Average Rate.		Estimated Value.
Tobacco leaf,	hhds, 9,879	$50 00	per hhd	$493,950 00	9,044	$45 00		$406,980 00
do. manufactured,	boxes, 5,904	15 00	per box	88,560 00	5,446	13 29		71,887 00
Hemp,	tons, 9,258	110 00	per ton	1,018,380 00	9,454	85 00		802,590 00
Lead,	tons, 16,428	85 40	"	1,402,951 20	24,200	74 00		1,790,800 00
Flour,	bbls, 306,412	4 20	per bbl	1,286,930 40	387,584	4 25		1,637,332 00
Wheat,	bush, 1,792,535	80	per bush	1,434,028 00	2,194,789	70		1,526,352 30
Corn,	bush, 305,333	31	"	94,653 23	699,693	28		195,914 04
Oats,	bush, 252,291	28	"	70,641 58	243,700	21		51,177 00
Barley,	bush, 92,463	70	"	64,724 10	111,003	38		42,181 14
Rye,	bush, 5,844	40	"	2,387 60	9,075	35		3,176 25
Beans,	bush, 9,078	40	"	2,731 20	14,196	40		5,678 40
Beef,	tierces, 10,687	9 00	per tierce	96,183 00	9,369	8 50		79,636 50
Do.	bbls, 12,336	8 00	per bbl	98,688 00	7,953	6 50		51,411 75
Pork,	bbls, 133,862	8 00	"	920,896 00	96,618	7 50		724,635 00
Do. bulk,	lbs, 9,651,656	2½	per lb	241,291 40	8,454,000	2½		211,250 00
Lard,	tierces, 15,801	17 50	per tierce	276,517 50	6,579	17 50		113,132 50
Do.	bbls, 58,270	13 00	per bbl	757,510 00	67,329	13 50		908,941 50
Do.	kegs, 86,845	3 50	per keg	64,957 50	14,180	3 50		49,630 00
Bacon,	casks, 16,880	30 00	per cask	580,400 00	25,820	28 00		722,960 00

ESTIMATED VALUE OF PRODUCE—[*Continued*]

Do,	bbls & boxes, 3,245	12 50	pr box & bbl	40,562, 50	3,775	14 00	52,858 00
Pickled hams & sho'ders,	ca. 10,564	14 56	per cask	153,178 00	7,490	14 00	104,860 00
Whisky,	bbls, 29,085	7 50	per bbl	217,997 50	29,758	6 80	201,454 40
Tallow,	lbs, 721,460	6¾	per lb	48,698 55	483,920	6½	31,454 80
Butter,	lbs, 1,255,280	8½	"	106,698 80	1,106,240	9	99,561 60
Bale Rope,	coils, 19,065	7 25	per coil	142,211 25	12,633	7 25	91,589 25
Bagging,	pieces, 1,079	14 00	per piece	15,106 00	1,084	14 00	15,176 00
Potatoes,	bush, 103,500	30	per bush	31,050 00	157,697	30	47,309 10
Onions,	bush, 21,350	50	"	10,675 00	22,481	35	7,868 35
Grease,	lbs, 351,851	3½	per lb	12,314 78	201,350	3½	7,092 25
Hides, dry & green,	68,902	1 80	each	124,033 60	62,097	1 60	99,305 20
Hay,	tons, 920	16 00	per ton	14,720 00	845	12 00	10,144 00
Flaxseed,	bush, 26,500	85	per bush	22,525 00	32,460	80	25,968 00
Feathers,	lbs, 62,340	28	per lb	17,455 20	51,960	20	10,272 00
Brooms,	dozens, 11,023	1 60	per doz	17,636 80	6,713	1 25	8,391 25
Dried Fruit,	bush, 63,102	90	per bush	56,791 80	47,605	35	40,464 25
Green Apples,	bbls, 20,583	1 50	per bbl	30,874 50	12,628	1 50	18,792 00
Wool,	bales, 1,274	22 50	per bale	28,665 00	904	22 50	20,330 00
Total estimated value,				$10,087,327 99			$10,288,455 82

Difference in favor of the year 1848, $201,127,34.

Imports into St. Louis, for the years 1844, 1845, 1846, 1847, 1848, *and* 1849, *commencing January* 1*st, and ending December* 31*st.*

ARTICLES.		1849.	1848.	1847.	1846.	1845.	1844.
Apples green	barrels.	20,533	12,628	21,28	3,728	6,314	7,233
Beef	tierces.	10,687	9,369	5,735	000	000	000
Beef	barrels.	12,336	7,866	4,720	1,716	5,264	4,280
Bacon	casks.	16,880	29,423	14,425	11,803	6,180	19,225
Bacon	bbls and boxes.	3,245	6,622	1,289	1,618	149	484
Butter	bbls.	2,324	2,266	1,084	823	558	618
Butter	kegs and jars.	7,811	8,131	4,199	3,940	3,420	3,099
Brooms	dozen.	11,023	6,744	000	000	000	000
Beeswax	packages.	853	730	1,557	1,122	950	1,174
Bagging	pieces.	1,079	1,084	1,442	3,243	4,217	3,120
Beans	bbls.	1,516	3,337	5,337	4,370	2,091	1,518
Beans	sacks,	2,265	2,003	4,134	2,199	1,320	1,389
Bran shorts, &c	sacks.	65,418	63,726	000	000	000	000
Barley	bushels.	92,463	111,003	114,680	20,277	32,231	8,487
Buffalo robes	packages.	5,585	15,188	000	000	000	000
Buffalo robes	loose.	3,595	2,227	7,782	16,717	14,75	33,670
Corn	bushels.	305,338	639,693	1,016,318	688,649	107,927	56,720
Cheese	casks and boxes.	19,464	8,417	12,386	11,232	8,822	9,337
Cider	bbls.	2,638	1,180	336	421	763	550
Coffee	sacks.	67,353	78,842	77,767	65,128	46,204	38,721
Cotton yarns	packages.	22,836	11,480	12,762	13,260	10,756	5,354

TABLE OF IMPORTS—(*Continued.*)

Flour	bbls.	306,412	387,314	328,568	220,457	139,282	88,881
Furs	packages.	1,524	1,194	2,148	3,011	2,535	973
Feathers	sacks.	1,156	856	384	768	816	471
Flaxseed	bbls and sacks.	9,802	12,257	4,992	3,693	2,136	2,741
Ginseng	bbls and sacks.	374	152	267	77	54	138
Glass	boxes.	66,696	19,834	18,722	24,630	23,563	4,697
Hemp	bales.	46,290	47,270	72,222	33,853	30,997	59,292
Hides	green and dry.	68,902	62,697	71,877	63,396	70,102	55,572
Iron bar, sheet &c	tons.	28,562	16,341	15070	2,484	2,228	1,981
Iron pigs	tons.	5,143	4,463	2729	2,326	1,480	1,469
Lead	pigs.	590,293	704,718	749,128	730,829	750,877	595,012
Lard	tierces.	15,801	6,579	2,150	000	000	000
Lard	bbls.	58,279	67,339	32,021	28,462	76,52	12,293
Lard	kegs.	18,845	14,180	8,595	14,730	6,659	12,999
Whiskey	bbls.	29,085	29,758	22,239	29,882	29,788	24,510
Liquors	bbls and casks.	13,480	10,510	6,727	5,388	4,970	4,002
Malt liquors	bbls.	4,461	4,282	5,628	7,927	4,212	2,169
Lead, white	kegs.	6,821	2,247	5,256	3,466	1,526	1,973
Molasses	bbls.	29,214	21,948	21,554	14,996	11,788	3270
Nails	kegs.	76,567	49,596	22,589	28,073	21,587	23,703
Oils, linseed	bbls.	1,936	1,609	485	826	695	140
Oils Castor	bbls.	875	510	332	95	78	108
Oils assorted	bbls.	2,648	1,478	1,292	1,281	1,867	968
Onions	bbls and sacks.	8,540	10,804	4,252	5,215	2,111	3,806
Oakum	bales.	2,594	816	1,072	1,378	1,104	681

TABLE OF IMPORTS—(*Continued.*)

Oats	bushels.	252,291	243,700	202,365	95,612	16,112	16,480
Pork	bbls.	113,862	97,662	43,692	48,981	15,702	29,945
Pork, bulk	lbs.	9,651,656	8,454,000	285,797	630,765	261,754	136,333
Potatoes	bbls and sacks.	41,222	77,638	26,928	30,604	14,494	21,272
Peltries	packages.	2,641	1,889	2,694	1,266	1,917	1,540
Rice	tierces.	1,965	948	762	916	869	670
Rye	bushels.	5,844	9,075	7,566	5,282	3,054	1,161
Rope, hemp	coils.	19,065	12,633	10,798	5,123	8,890	12,525
Salt	bbls.	23,553	38,800	41,380	58,948	21,157	27,736
Salt	sacks.	291,709	204,744	106,392	177,724	112,684	124,234
Sugar	hhds.	26,501	26,116	12,671	11,608	10,259	9,070
Sugar	bbls and boxes.	7,348	14,812	20,111	5,752	1,516	1,630
Tallow	casks.	973	398	112	303	175	132
Tallow	bbls.	631	797	2,217	1,114	688	810
Tar	bbls.	2,539	5,027	2,217	1,558	1,630	528
Tar	kegs.	4,103	2,360	5,656	5,776	4,128	2,011
Tobacco	hhds.	9,879	9,044	11,015	8,588	11,564	9,707
Tobacco, manufactured	boxes.	5,904	5,446	6,548	7,903	7,777	7,380
Tea	chests.	3,281	2,384	3,028	3,049	2,086	1,800
Vinegar	bbls.	1,423	606	1,233	1,086	1,082	1,373
Wheat	bushels.	1,792,535	2,194,789	2,432,377	1,838,926	971,025	720,663

HOGS.

Owing to the lateness of the season, very little was done in the packing business until about the 1st of December. The opening price for the best description of hogs was $2,25 to $2,50, which continued to be the range of the market until about the close of the year, when a slight advance was obtained. Several thousand head going off at 1-8 and 1-4 above these figures, and for the past ten days, or up to the 10th of the present month, $2,75 was the current rate for No. 1, and in a few instances as high as $3 was paid. The present packing season commenced fully a month later than the previous one, and it has been the shortest ever known, lasting only about six or seven weeks, commencing on the 26th or 28th of November, and closing, it may be said, with the middle of January—for even at the present writing, (10th of January) the principal business is over, and a majority of the houses have suspended operations for the season.

Upon inquiry at the different establishments in this city—sixteen in number—we find the whole number of hogs packed, up to the 10th of January, to be 115,253 head, making an increase already of 32,753 head over the entire number packed during the season of 1848-'49.

Below, we append a statement of the hogs and cattle cut and packed at the different houses in this city, from the 20th of October, 1849, to the 10th of January, 1850. This statement embraces a few hogs (say four or five thousand head) which were slaughtered for larding and other purposes, before the commencement of the regular packing season; but as they come legitimately within the provision business of the city, we include them in our table. The number of cattle slaughtered for packing has been quite small, but our tables show a slight increase over the previous season's business.

The following estimate of the number cut and packed from the 20th of October to the 10th of January, we have obtained from the proprietors of each establishment, and it may be relied upon as being entirely correct.

Houses.	*Hogs.*	*Cattle.*
M. Steitz,	2,800 head	——
McFaul's,	3,300 "	——
Wm. Fitzgerald,	3,260 "	——
Joseph J. Bates,	4,500 "	500 head.
Whittaker & Palmer,	4,776 "	——
R. Taylor & Co.,	4,900 "	——
G. & C. Bayha,	6,247 "	——
J. Gibson & Co.,	3,500 "	——
Wm. Risley & Son,	6,000 "	1,378 head.
John G. Law & Co.,	7,000 "	——
H. Ames & Co.,	14,500 "	280 head.
R. McAlister,	13,670 "	——
Clarkson & Co.,	19,000 "	——
John Sigerson,	19,500 "	——
Two small packers,	2,300 "	——
Total,	115,253 "	2,158 head.

Comparative Table, showing the number of Hogs packed in this city for the past four years—last year not completed.

In 1846,	season closing in 1847	30,498	head.
1847,	1848	63,924	"
1848,	1849	82,500	"
1849,	1850	115,253	"
Total,		292,175	"

Total amount of beef packed in this city for the past two seasons—last year not completed—

In 1848,	season closing in 1849,	2,148	head.
1849,	1850,	2,158	"
Total,		4,306	"

From the foregoing statement it will be seen that the slaughtering of hogs in the city is rapidly increasing, and has risen from 30,498 in 1846—'47, to 115,253 the present season, which is not yet completed and doubtless, at the close the total number will reach one hundred and twenty or twenty-five thousand head. At the close of the market on the 10th of January, the weather was unfavorable, being too warm for either slaughtering or packing, and this, together with the advanced rates caused a partial, and in several instances a total suspension of operations. The pens were, also, comparatively bare of stock, and in order to complete the season's business, several packers were willing to purchase at $2,75, and for extra hogs perhaps as high as $3 could be obtained. The high price of cattle throughout the season has deterred packers from entering extensively into the business of packing beef, and up to the close of our inquiries (the 10th of January,) we find the total number cut and packed to embrace only 2,158 head, but even this small amount shows a slight increase on the number put up during the previous season.

At the commencement of the past year the market opened for No. 1 cattle at $3,25 to $3,50, but before the close of the month of April prices had advanced to $4,50 *a* $5, and for a short time even higher rates were paid fcr shipment. Throughout the entire summer months the market was but moderately supplied, and rates continued firm at $4 *a* 4,50, but about the 1st of October there was a decline in the New Orleans market, which affected our own so far as the shipping demand was concerned, and prices from that time to the close of the season ruled at $3,25 *a* $3,75. No. 1 cattle not going above or below this range. All packed during the season were bought at $3 *a* $3,50 per 100 lbs. Of the entire amount of pork packed in this city this season it is estimated that fully one-third is for the European markets, and about one-third of this amount embraces what is termed singed meat, the remainder, or say 75 *a* 80,000 head of hogs has been thrown into barreled and dry salted meats and into lard.

THE LUMBER TRADE.

From the Report of the Lumber Master to the City Register, it appears that the following amounts of lumber, shingles, laths and staves, were received at the landing during the year 1849:

THE LUMBER TRADE.

1849.	Lumber.	Shingles.	Laths.	Staves.
January, - - -	125,331 ft.	100,000	———	———
February, - - -	161,402	340,000	———	———
March, - - -	418,124	230,000	———	53,000
April, - - -	1,947,603	1,818,000	140,000	143,000
May, - - - -	2,737,679	976,000	———	136,000
June, - - -	3,675,967	106,500	———	56,000
July, - - - -	1,455,825	900,000	150,000	51,547
August, - - -	2,389,838	240,000	———	115,000
September, - - -	3,938,113	660,000	390,000	298,000
October, - - -	1,684,896	———	604,500	301,800
November, - - -	4,480,292	2,021,000	———	94,450
December, - -	1,173,580	653,000	———	87,000
Total, - -	24,188,651	7,334,500	1,290,500	1,435,797

5,000,000 feet estimated by Lumber Master not measured.

8,400,000 " " of pine, oak, &c., cut by the fourteen city mills for the year 1849.

37,588,651 feet total amount of lumber for 1849 received from foreign sources, and manufactured in the city of St. Louis.

Total amount of Lumber received in 1849, - - -	24,188,651 feet
Total " " " 1848, - -	22,137,209 "
Increase for 1849, - - - -	2,051,442 feet
Total amount of shingles received in 1849, - - -	7,334,500
Total " " " 1848, - - -	15,851,500
Decrease for 1849, - - - - -	8,517,000
Total amount of laths received in 1849, - - -	1,290,500
Total " " " 1848, - - -	2,598,915
Decrease for 1849, - - - - -	1,308,415

Below we annex a statement of the imports of lumber, shingles and laths for the past five years;

	Lumber.	Shingles.	Laths.
1845 - -	10,389,382	13,927,500	2,328,700
1846 - -	13,169,332	10,652,000	1,807,700
1847 - -	16,917,850	13,098,800	2,817,000
1848 - -	22,137,209	15,851,500	2,598,915
1849 - -	24,188,651	7,334,500	1,290,500
	86,802,424	60,867,300	10,842,815

A table showing the monthly arrivals, of steamboats, barges, flats, and keels, with their respective tonnage, Harbor Master's fees, &c., for the years 1848 *and* 1849.

	Arrivals of steamboats and barges		Keel and flat boats		Tonnage o. steambsats and barges		Wharfage.		Harbor Mas-ters fees.		Haip into the city treasury	
	'48.	'49.	'48.	'49.	'48.	'49.	'48.	'49.	'48.	'49.	'48.	'49.
January, - - -	129	52	12		21,536	11,954	$1,398 80	$597 70	$111 90	$47 81	$1,276 90	$530 54
February, - -	141	98	25		24,872	23,614	1,329 60	1,180 75	106 36	106 46	1,223 24	1,226 44
March, - - -	238	358	31	26	25,492	75,835	2,324 60	3,849 75	185 96	307 98	2,118 64	3,604 37
April, - - -	437	388	41	27	89,678	85,123	4,569 90	4,384 65	365 59	350 77	4,204 31	4,004 23
May, - - -	285	262	20	8	63,528	62,756	3,213 90	3,803 30	257 11	264 26	2,956 79	2,940 12
June, - - -	246	264	16	11	55,502	58,125	2,799 10	2,924 25	223 92	231 56	2,586 18	2,663 04
July, - - -	332	157	12	7	73,427	38,358	3,700 35	1,935 50	296 02	154 34	3,404 33	1,780 66
August, - - -	299	213	22	12	58,635	43,323	2,964 25	2,182 12	237 14	172 75	2,727 11	1,986 70
September, - -	411	312	40	7	79,705	60,865	4,063 75	3,052 75	323 10	240 58	3,738 65	2,766 77
October, - - -	325	287	44	3	59,768	57'120	3,205 40	2,859 50	256 43	228 76	2,948 96	2,630 74
November, - -	358	336	66	46	63,121	61,784	3,275 55	3,187 70	262 04	254 17	3,013 54	2,922 98
December, - - -	267	248	19	19	53,049	55,034	2,685 95	2,783 20	214 87	215 68	2,471 08	2,474 82
Total, 1848 - -	3468		332		688,213		$35,531 15		$2,842 44		$32,688 71	
Total, 1849 - - -		2975		166		633,892		$32,246 20		$2,575 62		$29,531 51

Comparative arrivals of Steamboats at the Port of St. Louis, from New Orleans, Cairo, the Ohio, Upper Mississippi, Illinois, and Missouri rivers, and all other points during the years 1846, '47, '48 *and* '49.

	New Orleans.				Ohio River.				Ills. River.				Up. Miss.				Mo. River.				Cairo.				Other points.			
	'46	'47	'48	'49	'46	'47	'48	'49	'46	'47	'48	'49	'46	'47	'48	'49	'46	'47	'48	'49	'47	'48	'49	'46	'47	'48	'49
January,	15	22	29	13	8	8	11	5	3	9	26	14	5	4	24	2	7	—	1	—	11	13	7	15	5	16	12
February,	33	15	26	32	26	16	12	18	42	8	33	19	31	8	20	4	1	1	1	3	10	9	5	21	6	13	17
March,	25	48	53	38	26	28	38	58	40	85	72	82	36	41	48	79	10	14	19	44	3	16	10	21	13	29	27
April,	27	77	47	36	35	41	43	65	44	91	67	63	55	74	76	117	20	32	33	63	1	18	9	14	12	14	21
May,	59	93	22	22	65	61	37	38	80	106	82	42	115	128	67	73	43	63	38	50	19	7	14	10	20	36	18
June,	36	49	30	19	52	37	44	33	51	60	53	56	98	91	75	77	47	48	39	43	8	13	11	11	13	16	22
July,	23	67	30	21	30	41	48	13	32	58	55	33	60	81	51	58	32	45	34	19	19	5	6	16	19	28	10
August,	32	24	26	17	44	37	55	16	32	41	71	62	56	51	75	67	29	32	40	28	10	16	8	18	24	27	14
September,	30	28	48	31	37	30	42	33	15	45	64	87	46	57	66	77	27	23	39	41	18	21	11	16	28	64	19
October,	32	22	51	26	48	67	43	40	41	57	70	70	61	80	82	87	18	31	36	34	18	32	12	37	34	72	18
November,	31	32	49	27	24	42	48	43	30	60	63	93	56	69	66	109	14	16	42	21	13	16	14	27	18	38	15
December,	49	23	33	31	27	22	8	39	36	38	34	65	44	33	47	61	8	9	5	9	16	28	15	26	12	43	24
Total,	395	502	426	313	420	430	429	401	446	658	690	686	668	717	697	806	256	314	327	355	146	194	122	232	202	396	217

GEOLOGICAL SURVEY.

It affords us no small degree of gratification that this important measure has at length been brought forward in the Senate of the United States; and we have reason to hope that it will receive the sanction of the National legislature.

Missouri, we believe, is the only State that has memorialized Congress in behalf of this measure; and hence we expected that it would have been claimed and brought forward by some one of her senators or representatives. Yet, we do not regret that it has fallen into the hands of the able and influential Senator from Illinois, whose zeal for the great interests of the west is a sure guarranty for his most active exertions in its behalf.

We are furthermore pleased that the bill proposes to embrace all the States containing public lands: this is just, and the more gratifying to us, perhaps, from the consideration that while we have been laboring in behalf of our own State, whatsoever benefits may flow from our humble efforts will be shared in common by other States of the west and south.

IN THE SENATE OF THE UNITED STATES,
DECEMBER 27, 1849.

Agreeably to notice, Mr. Douglass asked and obtained leave to bring in the following bill; which was read twice, referred to the Committee on Public Lands, and ordered to be printed.

A BILL

Granting to each of the States in which the public lands are situated, a quantity of land equal to one township in each land district, to aid in making a geological suavey of such States respectively.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there is hereby granted to each of the States of the Union, in which public lands are situated, a quantity of land equal to one township in each land district in each of said States, to aid in defraying the expenses of a geological survey of said States, under the direction of their respective Legislatures; said lands to be selected by the Governors of said States respectively in legal subdivisions, according to the United States surveys within their respective limits: *Provided,* That said lands and their proceeds shall be faithfully applied by the legislatures of said States respectively to a scientific exploration and geological survey of the territories within their respective limits, and to the preparation and publication of suitable reports, maps, and drawings, and to no other purpose whatsoever: *And provided further,* That each of said States shall present to each of the other States and Territories of this Union at least three copies of all such reports, maps, and drawings, and also to Congress at least fifty copies of the same, for the use of the Government of the United States and the Smithsonian Institution.

THE ARKANSAS LEAD MINES.

We find the following account of the lead mines, near Little Rock, in the Arkansas State Democrat. We regard this as among the most interesting discoveries of mineral that has been made in the Valley of the Mississippi; and trust that it will be the means of directing the attention of scientific men and capitalists to the long neglected mineral wealth of this region.

The neglect of these mines, for so long a time after their existence was known, is a strong argument in favor of a geological survey of all the new States. And the employment of a graduate of the school of mines at Freiburg, as mining Engineer, furnishes an argument in favor of the establishment of a school of mines in our own country.

THE MINES NEAR LITTLE ROCK.

Traditions of successful expeditions of French and Spanish treasure hunters up the Arkansas river: indicate a large extent of country around the locality of these mines to be rich in valuable ores. Gold, silver, lead, and precious stones are said to have been found in this region by the earliest explorers. How much truth there may be in these statements cannot be known until the country is thoroughly explored and minutely examined; but the various localities where these treasure-seekers have left the most evident marks of their presence—the ruins of furnaces, the remnant of crucibles, and the numerous "old diggins"—bear convincing testimony of extensive explorations, in years long past; but the results of these expeditions have been lost in the lapse of time, or have come down to the present generation in so vague a garb as to beget but little confidence in the reality of the gorgeous livery with which these traditions were invested by the earliest settlers.

Until comparatively a few years since, not a single discovery of any valuable mineral had been made throughout this entire region, and the remembrance of those traditions had become nearly obliterated, when, they were, in a measure, revived by the discovery of mineral on the lands now worked by the South-west and Arkansas Mining company. An analysis of this mineral proved it to be argentiferous lead ore. Notwithstanding this discovery, the locality was permitted to be without a thorough examination for a period of fifteen years; and it was not until a year or two since that its productiveness and immense value were demonstrated. In the Spring of 1848, Mr. O. D. Moulton, one of the new company, a miner from Wisconsin, examined this locality, and believing it to promise a fair remuneration for his labor, undertook to explore it. The result fulfilled his highest anticipations. After a few weeks labor he discovered a vein from which he subsequently raised about fifty thousand pounds of ore. This success gave an increased impetus to the enterprise; and in the Fall of the same year, the mammoth vein, upon which the company are now working, was opened. With only four hands, there were raised, in four months,

from this deposit, about four hundred thousand pounds of ore! crowning the exertions of the few individuals engaged in this undertaking, with a measure of success rarely equalled in the history of lead mining in the United States. In addition to this amount large quantities have been raised from a number of shafts sunk near where the mammoth vein was first struck.

Two or three large shipments of this ore have been made to Liverpool, England. Of these shipments, a lot of about one hundred tons sold at prices ranging from £18 to £21 per ton. Lead made from the ore at the Mines, brought £37,10s. per ton. These rates are about treble the value of any other lead ore found in the United States.

The assay of the first shipment of ore to Liverpool was as follows:

"The Pig lead produces one hundred and twelve ounces silver to the ton of lead.

Lot ore 3 tons 4 cwt. contains 77 per ct. lead, which produces 64 oz. silver to the ton of lead.

Lot ore 8 tons 17 cwt. contains 72 per ct. lead, which produces 44 oz. silver to the ton of lead."

The following is the result of several assays made at New Orleans by W. P. Hort, of the United States Mint.

"No. 1. Lead ore, (galena, sulphuret of lead,) resembling that found in such abundance in Illinois—lead 85 per ct.; silver 30 oz. to the ton.

No. 2. Argentiferous lead ore, (very different from the former,) lead 70 per ct.; silver 150 oz. to the ton.

No. 3. Argentiferous lead ore; lead 70 per ct.; silver 200 oz. to the ton.

No. 4. Zinc ore—sulphuret of zinc, free from metallic alloys and therefore very valuable—yields from 40 to 45 per ct. of metal.

Assays have been made of the ores of these mines by celebrated scientific men in various parts of the Union. They all agree in pronouncing this mineral to be the richest argentiferous ore ever found in the Union; and some of their tests show *six per cent.* of silver in many of the specimens.

Although from the discovery of the first vein of mineral by Mr. Moulton, up to the time of the organization of the company under the charter, these mines have been worked under many disadvantages, yet they have yielded a greater profit than could have been anticipated. The enterprise was commenced by a young man, a stranger in this community, without much other capital than his own energy. With the means afforded by the mines, and by the assistance of several capitalists of this city, he has been enabled, gradually to surmount all difficulties, and ultimately, to establish the enterprise upon such a basis as to give the public all the assurance they can wish of its rapid progress, and the speedy realization of immense profits. On the 12th November last, these mines, together with a large amount of mineral lands in various sections of the State, were transferred to the Southwestern and Arkansas Mining Company, having a capital stock sufficient to carry on the work in the most advantageous mode. This company have secured the services of T. F. Moss, Esq., a graduate of the celebrated Mining school at Freiburg, who, as Mining Engineer, and General Superintendent, now has control of the mines of this associa-

tion, and is specially charged with the entire direction of the works. At his suggestion, a "working shaft" is being sunk, for the purpose of draining the mines, and increasing the facilities for raising the mineral. As soon as this shaft has reached the required depth, and the pumps are put in operation, the raising of the ore will be recommenced and continued without interruption.

We have the fullest confidence in the success of this enterprise. It will not only prove a source of immense wealth to the company; but it must exert a very beneficial influence upon the prospects of our State. We have an abundance of mineral localities within our territory; and we only need one practical illustration of the profits of mining, to give an impetus to the enterprise of our people in every portion of the State. We predict that not many years will pass by before the annual shipment of minerals from our State will press hard upon the amount of our agricultural exports.

MENTAL IMPROVEMENT.

BY W. L. N.

The intellectual faculties of man, like his physical nature, require both food and exercise to stimulate their growth, and develop their powers. Facts are the pabulum of the mind; but without mental effort and the exercise of reason, they afford but little nutriment. An individual may possess the wealth, and command the services of a nation, but he cannot enjoy health and strength without physical exertion. This is a condition of his nature, which cannot be performed by proxy. And, so likewise, one may be endowed with a mind possessing all the attributes of genius, and have access to all facts necessary to improvement, and yet, if he does not exercise his mental faculties, they will, in time, become enfeebled, and finally, in a great degree, be incapable of performing their functions. Nature does not permit her gifts to remain always with those who will not use them; but, in due time, re-claim sthe talent bestowed upon him who neglects to improve it. Individuals are generally unconscious of their own intellectual powers; and in most cases are indebted to accident and circumstances, for the improvement of their mental faculties.

But there are few who might not in an age like this, and, especially, in a country like ours, advance in mental improvement far beyond this passive condition. Unlike the premative ages when means for mental development were limited, facilities for improvement are now abundant. The very "fountains of the great deep" of mind seem to be broken up, and nature herself forced to yield her choicest secrets to the mandates of science. The philosopher appears to be drawing large and fresh draughts from the perennial springs of inspiration, and the consequence is, that science is asserting her supremacy over the

errors of tradition, and removing the rubbish which the ignorance and superstition of ages have thrown over truth. Ancient fastenings are cut loose, circumscribed and intolerant views discarded, and we find ourselves in the broad, unfathomed ocean of mind, with literary institutions, and more enlightened teachers for our ministers, *excelsior* for our motto, and emulation the propelling power. By these instrumentalities the diffusion and increase of knowledge have been greatly accelerated, discovery succeeds discovery, and improvement follows improvement in rapid succession.

In an age like this, where is the individual that can supinely fold his arms and remain an indifferent spectator of the achievements of human intellect? If any such there be let them awake from their stupor and comprehend the important fact, that intelligence controls this world of man, and, that degradation is the inevitable consequence of ignorance. Rely upon no contingency through which to escape the common fate of the ignorant, but make a voluntary and vigorous effort to develop your own mental faculties; and the earlier and the more assiduously this effort is made, the more effectual it will be in accomplishing the desired result. In youth the mind is free from care—free to act—and is more susceptible of impression. It is the silver prelude to a golden era. Hence the importance of improving these propitious moments. It is then that a desire for acquiring knowledge may be most successfully cultivated; and when this desire grows strong and becomes permanent no ordinary difficulty, or allurement, can turn the ardent student aside *from his purposes, and obstacles* are but incentives to increased exertion.

It is to the labors of such minds that the age is indebted for the discoveries, and improvements, which have added so much to human comfort. And yet, how few have thus devoted themselves to science! If such a small band could accomplish so much, in fifty years, to ameliorate the social condition, what mighty results may we not expect to flow from a universal diffusion of knowledge.

Youth of America, would you be actors and co-laborers in the great work of ameliorating the condition of the human family, then, cultivate your mental faculties and study to improve your moral nature—duty to yourselves, to society, and to the Creator demand this at your hands.

Will you neglect these claims for the enjoyment of pleasures which gratify for the time, but finally, terminate in injury to yourself and grievance to the community? Surely not. Would you enjoy elevation of character, and prove useful to your fellow man, resolve to select, so far as may be in your power, the study of such useful subjects as are most congenial to your nature. The mind, so far as it is known is capable of expansion and improvement without limit. It still retains this quality of original greatness which distinguishes man from every other form of earthly existences. It is this characteristic, more than any other, which reveals the immortality of its nature: unlike mans corporeal frame, which attains a certain stature that is transmitted from generation to generation without enlargement, the mind, spiritual, and may we not say eternal, in its nature, is capable of indefinite expansion; and with proper culture will continue to expand from age to age till the end of time.

PERIODICAL LITERATURE.

Although periodical literature receives a fair degree of encouragement from the people of this country, yet, the great advantages which it affords of acquiring information at little cost, of money and labor, are not generally appreciated nor understood.

In general, monthly publications are limited in their design to some one or more particular departments of useful knowledge; and if the Editor labors with fidelity he will be able, with but a moderate degree of talent, to afford his patrons more information upon the subjects which come within the range of his plan, than they can obtain from other sources without the use of an extensive library, and the application of more time than those engaged in the ordinary pursuits of life can spare.

Few individuals engaged in other than literary pursuits possess time, or means, to collect facts and examine thoroughly the many interesting and important subjects that are continually presented for consideration; this is the business and duty of the authors of periodicals: and herein consists the great economy of these publications. Suppose one should desire to keep himself advised of the state of our domestic and foreign commerce, and also, of the commerce of all nations; where else would he find this information in a form so convenient, satisfactory and cheap as in *Hunt's Merchants Magazine?* Should he desire to combine with commercial information a knowledge of the great interests of the south—her agriculture manufactures and internal improvements—where else could he find so much information in so small a compass, and at so cheap a rate, as in *DeBow's Commercial Review.* We mean no disparagement to other periodicals: but we have mentioned these because they embrace subjects important to be known and understood by all classes.

In the agricultural department, we have many valuable publications. Of these, every farmer should take one, at least. And here, we beg to recommend the *Valley Farmer*, published in our own city, as highly worthy of patronage. The first number of the 2d volume of this work appears in an improved form and contains much valuable matter. The *Cultivator*, published at Albany, New York, is another excellent work. The *Pictorial Cultivator* which accompanied the January number as a Christmas present to subscribers, is executed with much taste, and is alone worth the price of the work.

The *American Agriculturist*, published in the city of New York is also a work of merit and worthy of encouragement.

In the department of general literature, there are also in our country a number of periodicals highly worthy of patronage—among these may be mentioned the *Southern Quarterly Review*—and the *Southern Literary Messenger* both works of no ordinary merit.

THE

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ART. I.—PUBLIC DOMAIN OF THE UNITED STATES.

Although a large portion of the people of the United States regard the policy of the General Government, in respect to the public lands, as unwise and illiberal, yet, there has been no concert in the movement of those who are more immediately interested in correcting the evils involved in the present system. It is not to be expected that the citizens of States which contain no public land, will take the lead in this matter; for it is natural that they should look to the public domain as a source of revenue merely; and so long as the new States acquiesce in that policy which is supposed to be the most productive of revenue, it may be expected that the old States will remain satisfied with the present system.

It is the province and duty of the people of the new States to point out the evils and suggest a remedy; and having done this, we think they will find the non-landholding States willing to sanction any policy calculated to promote the general interest of the nation.

The time may be regarded as ripe for a movement in behalf of a change in the present land system; and, a bill proposing an important change having been introduced in the Senate of the United States by Mr. Douglass, of Illinois, the people of the new States should now rally in support of the measure. We are, however, constrained to state in advance, that Mr. Douglass' bill does not fully meet our views; but it is well that he has, in this first step towards a reform of the existing system, struck at its foundation. The proposition to donate one hundred and sixty acres of land to actual settlers, must appear startling to the minds of all parties; but may, notwithstanding, be the means of preparing them for the adoption of a system which will not only give a reasonable quantity of land to the settler, but, at the same time, provide a fund for education and internal improvement—objects which appear to have been entirely

overlooked by the author of the bill now before the Senate. We copy the bill throughout, that our readers may have an opportunity of examining its provisions in connection with our own views:

"A Bill

"Granting one hundred and sixty acres of the public lands to the actual settler, who shall reside thereon, and shall cultivate a portion thereof, for the period of four years.

"*Be it enacted by the Senate and House of Representatives of the United States of America, in Congress assembled*, That whenever any person shall take actual possession of any tract of the public land according to the legal surveys and subdivisions, not exceeding one quarter section, and shall reside thereon, and use and cultivate a portion thereof for the period of four successive years, he shall be entitled to a patent from the President of the United States for the same, upon the following terms and conditions, to wit:

"1st. Any person wishing to avail himself of the benefits of this act, and desiring time to enable him to erect his house and become an actual settler, may file with the Register of the Land Office, in the district where the land shall be situated, an application in writing, signed by himself, and verified by affidavit, specifying the legal description of the tract or quarter section upon which he proposes to settle, and setting forth that it is not occupied by any actual settler; which statement shall be received and filed by the Register, who shall thereupon designate the tract upon the books and plats of his office, as claimed by such applicant, and the said tract shall not be deemed subject to location or entry by any other person for the period of six months from such application.

"2d. Within six months from the filing of the application as aforesaid, the applicant shall file with the Register of the Land Office, a statement in writing, signed and sworn to by himself, and supported by the oaths of at least two disinterested witnesses, who shall have a personal knowledge of the facts recited in said statement, stating that the said applicant had taken possession of said tract or quarter section of land, by enclosing a portion thereof, and erecting a house thereon, and becoming an actual resident therein; specifying particularly the date of such possession and residence, and the extent of the enclosure, and the nature and value of the house and other improvements; which statement and affidavit shall be received and filed by the Register, who shall designate the said tract or quarter section on the books and plats of his office as having been located by the occupant, and thereby reserved from sale, location, or entry, by any other person, for the period of four years and six months.

"3d. At the expiration of four years from the filing of said statement and affidavits, as herein provided, the said occupant shall be entitled to a patent for his said land, by proving to the satisfaction of the Register and Receiver of the proper Land Office, by his own affidavit, and the oaths of at least two disinterested and competent witnesses, that he has continued to reside on said tract or quarter section during the entire period aforesaid, and had cultivated a portion thereof during each of said years.

"SEC. 4. *And be it further enacted*, That the privileges of this act shall extend to any person being the head of a family, and all unmarried persons, male and female, above the age of eighteen years, who shall comply with the terms and conditions herein prescribed.

"SEC. 5. *And be it further enacted*, That the Commissioner of the General Land Office is hereby authorized to prepare and issue such rules and regulations consistent with this act, as shall be necessary and proper to carry its provisions into effect."

Before stating our objections to this bill, it may be proper to review the policy involved in the present land system. No public land can be sold for less than one dollar and twenty-five cents per acre; and as evidence that this is esteemed a high price for choice lands in new districts, it is very rare, except in times of speculation, that a tract sells at the public sales for more than the minimum price. Indeed, we infer from the Report of the Commissioner of the General Land Office that *no* lands have been sold in Iowa at more than one dollar and twenty-five cents per acre; for this is stated as the average of all lands sold in that State. The lands sold in Missouri, throughout a period of more than thirty years, have averaged only one dollar and thirty-one cents per acre; and the highest average in any of the States is stated at one dollar and sixty-six cents. This is the result of the sales in Ohio, where a large portion of the land was sold under the credit system at two dollars per acre. Although these results afford incontestible evidence that one dollar and twenty-five cents is a fair price for the choice tracts, yet the Government will not abate one cent in the price of the poorest acre; but obstinately holds it, from year to year, and, we may say, from generation to generation, like a heartless miser, hoping for the day when the necessities of the people will compel them to pay more than its value. This policy involves one of the most odious principles of speculation: and is the more to be deprecated because practiced by the Government, while it taxes its constituents to enable it to hold on to a commodity until an exorbitant price can be obtained. But, one dollar and twenty-five cents per acre is not all that this designing speculator expects to obtain by the sale of a few choice tracts. The improvements of the hardy pioneer are looked to as the means of enhancing the value of the adjacent unsold lands; and the amount of the improved value goes into the public treasury, to be disbursed at distant points, instead of remaining in the community where it was produced. To say that this policy is illiberal, does not denote its true character—it is *tyrannical*. Such conduct when practiced by individuals never fails to render them odious; and we are persuaded that, when fully comprehended by the people, this grinding policy on the part of the Government, will be promptly repudiated, even by those who are most benefited by its operation.

By reason of this policy, large tracts within the limits of the new States remain unimproved, while the sovereignty of these States is abridged by a denial of their right to tax the property of this great land-holder. Of 43,123,200 acres contained in the State of Missouri, there remained, on the first day of January eighteen hundred and forty-nine, 29,436,942 acres, the property of the General Government; 12,353,912 of which were offered for sale anterior to the year 1836.

Thus it will be seen that the General Government still holds more than two-thirds of the land in this State exempt from taxation. There is comparatively but a small portion of this land that is not worthy of cultivation; but the choice tracts in the most desirable locations having been purchased, emigrants prefer going to newer States, where they can make better selections; and hence the increase of population, and the development of the resources of the State, are greatly retarded. But Missouri does not suffer alone: the prosperity of other States is also affected by this unjust policy.

The following table shows the area and quantity of unsold lands in the twelve States containing lands belonging to the General Government, and also the average price of the lands sold in each:

	Area Acres.	Quantity Unsold.	Average per Acre.
Ohio,	25,576,960	807,556 15	1,66
Indiana,	21,637,760	3,271,730 59	1,38
Illinois,	35,459,200	14,998,937 55	1,30
Missouri,	43,123,200	29,436,942 34	1,31
Alabama,	32,462,080	17,450,560 03	1,56
Mississippi,	30,174,080	14,326,430 95	1,36
Louisiana,	29,715,840	23,462,018 00	1,27
Michigan,	35,995,520	25,057,704 32	1,26
Arkansas,	33,406,720	27,464,603 49	1,26
Wisconsin,	31,511,360	27,431,029 76	1,27
Iowa,	32,584,960	28,368,436 89	1,25
Florida,	37,931,520	33,837,392 79	1,29
	392,579,200	245,913,343 72*	

From the foregoing table it appears that the Government holds 245,913,343 acres of land in these twelve states; being more than three fifths of their entire area; and under the present system $307,391,683 must be paid into the treasury of the General Government by the people before the entire quantity can become private property. Did the Government demand nothing more than the value of the lands, the payment of this vast amount might be submitted to without just cause of complaint on the part of individuals; but still the wisdom of such a policy would be questionable. The true state of the case, however, is far different. It may be safely affirmed, we think, that the average value of the public lands in these twelve States does not exceed fifty cents per acre. This, in the aggregate is $184,435,000 less than the Government price. In view of such facts as these none can be so blind as not to see that the present system is, in its very nature, calculated to compel the people, by reason of their peculiar condition, to pay an exorbitant price for public lands; and this consideration alone, to say nothing on the subject of State sovereignty, should be sufficient to induce the people of the new States to unite in demanding a repeal, or modification of the system. Nor, do we believe that the old States can desire to retain a system involving so much injustice to a large portion of the Union. Indeed, they would derive more ben-

*Several interesting tables, in respect to the sales of the public lands, will be found under the head of "Miscellaneous Statistics."

efit from the increased prosperity of the new States, under a better system, than they now derive from their share of the revenue arising from public lands. This, at least, would be the case in regard to the eastern States, whose prosperity depends so much upon the development of the resources of the west and south.

But, notwithstanding our objections to the present land system, we would not give away the public domain, to the extent proposed by Mr. Douglass' Bill. In the first place, the Government ought to be paid out of the proceeds of the lands, for the cost of surveying and other charges incident to disposing of the title. And then, if the nation should be willing to give up all revenue, Congress should so dispose of the balance as to promote the great objects of education and internal improvements. Were the government to donate one hundred and sixty acres to each settler, and still retain the price of the public land at the present rate, but very little would ever be sold after such a law should take effect; and the poorer lands would remain the property of the General Government for an indefinite period. Nor would lands donated in aid of education or internal improvements be available until the lapse of many years. To avoid these consequences we would limit the donation to settlers to eighty acres. This would be a liberal bounty from the government to the constituent; and amply sufficient to enable any individual to support and educate a family. Indeed it is as much as the head of one family can generally cultivate to advantage, without hired labor; and it is evident that in a country where every man may own land who will improve it, there would be but little labor for hire. But many individuals would desire to own more than eighty acres; and having received that quantity as a donation they would be the better able to purchase. Emigration would increase: and owing to the fact that any one who chose might take possession of adjacent land, those who should be able, and desired to do so, would purchase without delay; and hence we may predict that, perhaps, as much land would be sold under such a system as is now sold under the present one.

As another modification of the present system, we would establish a scale for graduating the price of the public lands that would put an end to the title of the Government, at the expiration of a certain time after they had been offered for sale. All lands should be surveyed, and offered at one dollar and twenty five cents per acre as at the present time—excepting from sale such tracts as had been settled on before the offering—and after the end of one year from the date of offering them, the price should be reduced ten cents per acre; and so every year, until reduced to fifteen cents, when they should be relinquished to the respective States in which they may be located, to be appropriated to such purposes as Congress may see proper to designate. The price of lands that may have been in market more than five years before the passage of the law, might be put down to ninety-five cents per acre at once, and be subjected thereafter to a depreciation of ten cents per annum; and all other lands which may have been in market more than one year, might be subjected to the scale of gradation from the passage of the law. This would put an end to the title of the Government in eleven years after the lands are offered for sale.

We are not so vain as to imagine that the system we have suggested is the best that can be devised; but it is submitted mainly for the purpose of calling forth discussion upon what we esteem the most important measure of the present day, especially to the Western States. The new States have submitted too long to the present illiberal and unjust policy pursued in disposing of the public domain: and we earnestly hope that they will take active measures to urge upon Congress, during its present session, the adoption of a better system—a system that will invite an industrious and enterprising emigration; that will supply the means of establishing common schools sufficient for the education of every child in the new States; that will afford aid to works of internal improvement; and, as a consequence, bring capital hither to develop our mineral wealth, and build up manufactures. And, we believe that a system can be devised that will afford important aid to all these objects without materially affecting the revenue derived from the sale of lands.

ART. II.—THE MOSQUITO QUESTION.

To redeem our promise we now present the commercial view of this question. In doing so we shall endeavor to unfold the secret purposes of the British Government for its intervention in the affairs of that part of the American continent, and shall show that it is to acquire absolute sovereignty over that territory, and thereby secure to herself the only practical route for a ship canal between the two oceans.

Ever since the United States acquired Louisiana, England has been jealous of American power and commercial competition. Boasting of being the mistress of the ocean, she could not brook, that facilities should be afforded us to become her rival, and dispute with her the empire of the sea. It is said that Bonaparte, when he had signed the treaty of the Louisiana cession, exclaimed, "I have given to England a rival which in half a century will humble her." The half century has not yet elapsed, but the prophecy of Napoleon is drawing to its fulfillment. Oregon and California are ours, and we have a clear sea coast on the Pacific of 1200 miles, embracing the best harbors on the western coast of the continent, and the richest mineral and agricultural lands in the world. Our people are already there, and the rich commerce of oriental Asia, is inviting our enterprise to come and possess it. We have already projected and will complete an iron road through the centre of the continent, to the Pacific; when that is completed, and the steam car and steam ship will have placed us in communication with Canton and the east; then the idea that led to the discovery of America, will be realized, and the prophecy of Napoleon accomplished.

England has not been an indifferent observer of our march to greatness: she has watched it with fearful apprehension, and for half a century has left no expedient untried to check our onward march. But Providence, who holds in his hands the destinies of nations, has shielded us from her machinations, and brought her wisest counsel to nought.

It is not necessary to enumerate all her efforts to arrest our progress towards the western ocean: a few of the most prominent will suffice. When we acquired Louisiana, some doubt was raised whether it extended to the Pacific. France, it is true, claimed to the Pacific, and we were the assignees of her rights. But, to a certain extent, our claims conflicted with the claim of Spain, whose northern boundary was not defined. By the cession of Louisiana, we acquired the entire control of the Mississippi from its source to its mouth. In the second war with Great Britain, she sent a chosen army, victorious on every battle field in Europe and believed invincible, to seize upon New Orleans. The unexampled and brilliant exploits of Jackson and his western heroes, averted from that city the fate which British arrogance had prepared for it. We all know if New Orleans had fallen, never would it have been restored, if British power could have maintained it. Even as it was, in her negotiations for peace she demanded the *free navigation of the Mississippi*. In 1812 during the war, she sent the sloop of war Raccoon, and seized upon the Columbia river; according to treaty stipulations, but after long equivocation, she restored Oregon and acknowledged the American sovereignty, pending the dispute of ultimate sovereignty. But to defeat the ultimate sovereignty of the United States, she immediately entered into a treaty for the joint use of said territory, for trapping and hunting for ten years. In 1827 this treaty was extended indefinitely. The British claim meanwhile had strengthened, as all her claims do, by delay. When the question of the north-western boundary came up, she had extended her claim so as to embrace the straits DeFuca, Puget's sound, and the mouth of the Columbia river, leaving us no harbor upon the North West coast.

While negotiations were pending, and war with Mexico inevitable, she gave secret orders, upon the breaking out of hostilities, to seize upon California to prevent its falling into our hands. She had concerted all necessary preliminaries for this purpose, if not by positive agreement with, at least by the connivance of Mexico. The transfer of the Missions, and other extensive property to British subjects; the large concession to the British emissary, Macnamera, were all preliminaries, so as to give a show of justification to the seizure, should it take place. The British man-of-war, the Collingwood, sailed from Mazatlan as soon as the news of the collision on the Rio Grande reached that port, without designating her destination. On board of her was Macnamera. A British man-of-war that then lay in the Columbia river, had orders to sail for San Francisco, and seize upon California at the first intimation of hostilities.

This scheme, so carefully elaborated, and maturely concocted, was instinctively, or rather providentially defeated, by a young man at the head of fifty men, then in the Western wilderness, without concert with, or instructions from our Government, and even without the

knowledge of the changed relations between the United States and Mexico. We allude to Col. John C. Fremont. His conduct at Sonoma and San Francisco, in routing and driving the Mexican forces from the country, induced Commodore Sloat, then at Monterey, to seize that place, and hoist the American flag. The Commodore knew that a messenger from the States (Gillespie) had just arrived at Fremont's camp, who, he supposed, had brought Fremont news of war, and instructions for what he was doing. Fremont, while in pursuit of the fugitives in their flight to the southward, had an interview with Com. Sloat, when the latter learned to his regret, that Fremont acted upon his own responsibility, and without any information or positive instructions. But the arrival of the Collingwood, the astonishment of the British in seeing the American flag floating over Monterey, and their wonder how the news of war should have reached Monterey in advance of them, reconciled Com. Sloat to what he had done, and allayed his fears of having acted too hastily. He had orders, in the event of war, to seize Monterey, and hold California as an American conquest. Fremont's movements had caused him to carry out his instructions in advance of the news, and while he could, so that when the Collingwood arrived, Monterey, and all California was in the peaceable possession of the Americans.

Thus the deepest scheme, and heaviest blow aimed at our commercial supremacy were defeated providentially, and the last obstruction to our onward progress removed from our way to possess the commerce of the Pacific, and through it to control that of the world. As the spider when she entraps the fly in the cobwebs she spread him, trusts not to retain him by a single thread, but wraps him in a thousand filaments so that if one breaks, others will hold, and her prey be safe. So with England. She never relies upon one filament to secure and hold her prey. Her web consists of thousands, which are spread all around her intended victim, hedging him in on all sides, and confining him in every movement. He may escape her diplomacy but her policy never. The first is local and limited, but the latter embraces the globe.

How long England had an eye on California it is impossible to say; but in the latter part of Mr. Van Buren's administration there were some rumors that there were negotiations pending between our Government and Mexico for the purchase of California. It was then intimated by the English press that California was mortgaged to the British holders of Mexican bonds. It is however somewhat singular that simultaneously with these rumors of American negotiations for purchasing California, England should take the first steps that have resulted in the seizure of the Mosquito shore. The object of that seizure will be evident by a mere enumeration of facts. In 1838 Captain Sir Edward Belcher of the Royal Naval made a survey of the harbor of Realjo on the Pacific and explored the rivers that fall into the ocean in the direction of Lake Leon or Managua. He found the Rio Estero Real, navigable thirty miles, (the distance he ascended with the Starling) for vessels drawing ten feet of water. They could have gone further, but he says, "the strong winds rendered the toil of towing too heavy." "The natives and residents assert sixty more (i. e. miles of navigation.) But steamers will be absolutely

neeessary to tow against the prevalent breezes." His examinations of the country high up the river convinced him that it had its source near Lake Managua, and that the country presented no serious obstacles to the construction of a canal.

He saw the mountains beyond the eastern side of the Lake, from the top of a hill on the river's bank, with "no higher land than the intervening trees;" and, upon this, reports to the British Government, "*that it is the most advantageous line for a canal.*"

In 1840, the British Government sent out a corps of Engineers in Her Majesty's ship *Thunderer*, to survey the Rio San Juan, Lakes Nicaragua and Managua, and intervening country to the Pacific, with reference to the feasibility of constructing a ship-canal through the same, from ocean to ocean. Mr. Bailey was Chief Engineer of this expedition, assisted by Mr. Lawrence. Mr. Bailey had, a year or so before, made a survey of the same, under the employ of the Government of Central America. This survey established it beyond controversy to be the best route yet surveyed. In 1845, the Nicaragua Government placed Prince Napoleon Louis Bonaparte, now President of the French Republic, at the head of the executive direction for constructing said canal. *In* 1845, *England crowned the King of the Mosquitoes, and took him with the Mosquito country, defined so as to embrace the* MOST SOUTHERN MOUTH OF THE SAN JUAN, *under English protection.* In 1849, she notifies Messrs. D. L. White, & Co., American citizens, that she cannot permit said canal to be constructed, because it would trench on the sovereignty of the Mosquito country, which England was engaged to protect. With these facts, we leave our readers to draw their own inferences as to what were the reasons that induced England, in 1845, so suddenly to revive her claim, abandoned by the treaty of London, in 1786, to the Mosquito coast.

The idea of a western route to the Indies, if it did not originate with Columbus, at least inspired him with enthusiasm to demonstrate its truth and practicability. He was arrested on the way for its demonstration, by the until then unknown obstacles, the intervention of the American continent. The discovery of the Pacific by Balboa, and the circumnavigation of the globe by Magellan, demonstrated the truth of the theory of Columbus and the practicability of a western route to the Indies, provided a better communication between the two oceans, than the tempestuous route around Cape Horn, or through Magellan's Straits, could be discovered. The extension of the American continent southward into the region of perpetual frost that surrounds the Antartic Pole forbid the feasibility of a western route, unless a communication either through the continent or around it, in the north could be discovered. Hence the discovery of a north west passage, engaged the attention of European nations during the sixteenth century. For this purpose the rivers on the eastern coast of North America were examined. Hendrick Hudson, the discoverer of Hudson river, when he had penetrated through Hudson's straits into Hudson's bay, believed that he had been successful in his search for a passage. But to his mortification he found that he was land locked on the west, and that he was only in an immense bay, with no passage westward except in higher latitudes than that in which he had entered it. The Bay remains a lasting monument of his hazardous enterprise, important discovery and sad fate.

With the discovery of Hudson's Bay, the idea of discovering a natural communication between the two oceans for practical purposes, was pretty much abandoned. Attention was then drawn to opening an artificial communication across some of the isthmuses in Mexico and Central America. Cortez, the conqueror of Mexico, is said to have been the first to have projected a canal between the two oceans, through the Isthmus of Tehuantepec. This is doubted by some, as canals with locks were then unknown, except in Italy; but, it is nevertheless a fact, that Cortez did recommend to the Government of Spain, a plan for opening such a communication. But, as the discovery of the Pacific, made by Vasquez Nunez de Balboa, who crossed the Isthmus of Darien, and made the discovery of the South Sea in 1513, had established the fact that the Continent was there much narrower, and the obstacles to a communication by land much less, the project of Cortez did not receive much favor or attention at Court. Since then, four projects by canal have each, in turn, had its advocates, viz:

I. Through the Isthmus of Tehuantepec, by the Rio Huascacoalco, or Coatzacoalcos,* to the Gulf of Tehuantepec.

II. Through the Isthmus of Nicaragua, by the Rio San Juan de Nicaragua, Lake Nicaragua, Rio Tipitapa, Lake Leon, or Managua, to the harbor of Realejo, (pronounced Ray-ah-lay-ho.)

III. Through the Isthmus of Darien, by Rio Chagres, to the Gulf of Panama.

IV. By the Rio Atrato, and Rio St. Juan de Cauca.

We shall consider each separately, in the order in which we have placed them.

I. *Isthmus of Tehuantepec.*—From the fact that its principal river, the *Huascacoalco* has a good and safe harbor, with but few obstacles to its entrance, and as it can be made navigable for ships 110 miles from its mouth to the confluence of the Rio Alaman or Malentengo, this isthmus has received considerable attention both in Europe and America. The Vice Roy of Mexico Bucareli during the last century had the route explored and the soundings of the river taken. This was done in 1774 and the soundings of the entrance and harbor then taken prove that no perceptable change has taken place, in either from that time to 1842 when the last soundings were made by Senor Moro. The water on the bar remaining at half tide 21 feet, and in the harbor from 6 to 8 fathoms.

In 1824 the route was explored by a joint Commission constituted for the purpose by the Central Government of Mexico, and the State of Vera Cruz. The former appointed Don Juan de Orbegoza, the latter Don Tadeo Ortiz; each of these commissioners made separate reports to their respective Governments. The reports are explicit upon the practicability of the project, but in view of the political difficulties then existing in that country, recommended the improve-

*On the American maps, the river is uniformly called Huascacoalco. On some of the English maps, it is called Coatzacoalcos. On a Spanish map, which professes to be authentic, (Mapa de los Estados Unidos de Mejico, segundo lo organizado y definido por las varias actas del Congreso de dicha Republica, y construido por las mejoras autoridades: por J. Disturnel: i. e., Map of the United States of Mexico, as they are organized and defined by the various acts of the Congress of said Republic, and constructed from the best authorities: by J. Disturnel:) it is also called Rio Huascacoalco.

ment of the Huascacoalco to the Malatengo, that is, making it navigable for ships to that point, and from thence a carriage road to the lagoons that connect with the Gulf of Tehuantepec. The improvement recommended was estimated at $16,500,000 *pesos duros*. But owing to political and moral difficulties, more than physical obstacles, nothing has as yet been attempted, by either Government, to execute any plan of improvement.

The mountain chain being interrupted between Santa Maria Petapa and San Miguel Chimalpa, and with only an inconsiderable summit elevation that divides the waters flowing north into the Huascacoalco, and those south into the San Miguel or Chicapa no great difficulty would be encountered to construct a canal uniting the two rivers, were there any feeders to supply water to the canal at the summit level. This is a difficulty that is admitted in all the reports of surveys made of the route. To obviate this, various projects have been proposed. The one that has received most favor, is to construct the canal through the Portillo de Tarifa, the lowest point in the ridge, and supply it at this point with water from the Ostuta and San Miguel. For this purpose it would be necessary to build a dam in the Ostuta and excavate a trench 3 1-2 miles long to the San Miguel or Chicapa. Then a similar dam in the San Miguel, and a trench 16 1-2 miles long to connect with the canal at Portillo de Tarifa. Thence the most advantageous route by the Monetza and Chicapa to the Gulf of Tehuantepec. The Portillo de Tarifa is 200 metres (674 feet 3 inches) above the level of the sea at Tehuantepec and 160 metres (539 feet 4 inches) above the level of the confluence of Huascacoalco and Malatengo. The length of the canal from the mouth of the Malatenga to Tehuantepec would be about 50 miles. The number of locks in the whole line 161: which 89 would be required on the Pacific side and 72 on the Atlantic side. The cost of constructing the canal, locks, regulating the Huascacoalco, excavating the lagoons of Tehuantepec, and the Boca Barra we have seen variously estimated from $16.500,000, to $97,000,000.

From all the facts presented in the various reports, we believe the construction of a canal to be impracticable on account of its cost, if not impossible; but that the route is very favorable for a rail road, perhaps the best on the continent taking everything into consideration, and that as such it is worthy of favorable consideration. Don Pedro Garay in his "*Relacion*" for the purpose of calling attention to this route for the construction of a railroad, or carriage way across the Isthmus, has brought together a vast and extensive collection of facts bearing upon this point, which deserves favorable attention. Moreover we see in a late New York paper that Senor Garay had at his own cost constructed a carrriage way across the country from the head of navigation on the Huascacoalco to Tehuantepec, and that he is now in New York purchasing coaches to be used on it, and steamboats for the navigation of the Huascacoalco. Should he be successful the tide of emigration to California will be diverted through the route.

II. *Isthmus of Nicaragua.*—This route was surveyed by Mr. Bayly, a half pay officer in the British Navy, for the Republic of Central America in 1837-8; again, in 1840, Mr. Lawrence, in Her Majesty's ship *Thunderer*, made a survey of the river San Juan to its junction

with Lake Nicaragua for the British Government. Also Mons. A. Garella made a survey of the whole route, we believe under the auspices of Napoleon Louis Bonaparte now President of the French Republic. All these surveys agree in the entire feasibility of the project, and that the difficulties to its execution will not be of a physical but political and moral nature.

The harbor of the San Juan, as already stated, is the best on the coast from the Boca de Toro to Cape Gracias a Dios. The river San Juan has a course according to Mr. Baily, and M. Garilla of 90 miles: but according to Mr. G. Lawrence 104 miles, and can easily be made navigable for ships.

Mr. Baiyly says:

"The river San Juan flows from the Lake of Nicaragua at its "southwestern extremity, at the place where formerly stood fort San "Carlos now completely destroyed. Here is the only discharge for "the waters of both the Lakes. The whole length of the river "pursuing all its windings from San Carlos down to the Port of San "Juan del Norte, is ninety miles, it forms a magnificent stream, some-"what irregular in its breadth, which varies from 100 to 200 yards, "studded with small islands, forming for the most part a channel on "each side of them. The depth of the water varies from one and a "half to seven, eight and nine fathoms. In the mid stream the depth "is generally from three to five fathoms, but during the rainy season, "namely, from May to November, the depth is considerably increased; "for according to the observations, made at the ruined fort near "Grenada, in calm weather, in October 1838, when the rainy season "had just terminated, and again in May 1839 before the rains had "commenced, when the lake was at the lowest, the difference of "height between those extremes was found to be six feet six inches, "in November 1839, at which time the rains had ceased, the same "observations were made, and the result was that the waters had "risen fourteen inches less than in the previous year.

"The banks of the river, particularly the right, are fringed with "wood of all sizes and descriptions, with a dense undergrowth, "forming, altogether, a forest nearly impenetrable; consequently there "are no inhabitants, nor is the land cultivated, although of prodigious "fertility. The immediate shores are undulating, being in some parts "not more than a few feet, and in others between twenty and thirty "feet above the surface of the waters.

"Two large rivers, the San Carlos and Sarapiqui, besides many "small streams, discharge into the San Juan."

M. Garilla says:

"From the gentle declivity of the river San Juan, the current is "not strong, being at the rate of a mile or a mile and a half per hour, "except in the time of freshets, when it is accelerated variously, "according to circumstances. It is navigated all the year round by "boats of eight or ten tons burthen, called *bongos*, and which are "generally manned by ten or twelve men, besides the patron. They "can carry 100 *seroons* of indigo, or 500 hides, or a proportionate "quantity of Brazilian timber. The obstacles that now prevent the "advantageous navigation of the Rio San Juan are—first, the rapids: "secondly the drainage occasioned by its influx into another, called the

"Colorado, seventeen miles above the port of San Juan, and lastly, the "labyrinths of small islands, which extend ten or twelve miles from "the opening of the Rio Colorado to the mouth of the San Juan. It "is generally believed that at some former epoch, the Spaniards "purposely enlarged the opening of this branch, with the intent of "exhausting the main river, at that port, to such an extent as to "render the river impracticable to navigation, hoping thereby to "protect the town of Grenada from external attacks. In the present "advanced stage of the science of civil engineering, this obstacle "would be easily surmounted. The rapids are four in number, called "*del Toro*, *del Castillo Viejo*, *de los Balas*, and *de Machuca*, all com-"prised within an extent of ten miles; but there is a clear water-way "from one to the other, having good depth of from three to six fathoms: "the longest of these rapids is not more than one mile. The rocks by "which they are occasioned, are all placed transversely to the current, "leaving a narrow channel on each side, and showing their ragged "and sharpened edges above the surface of the water during the dry "season.

"The breadth of the river from this point, is between 100 and 120 "yards: the current rushes with violence, and dashes with great force "against and between the projecting points. The bongos, however, "make the passage without hazard, and we have never heard of the "occurrence of an accident.

"The Colorado diverges from the San Juan in 10 deg. 50 min. "north latitude, and after running in a south-easterly direction, falls "into the sea in 10 deg. 46 min., forming a dangerous bar. This river "abstracts from the main stream a considerable quantity of water, "the opening from the San Juan being 1200 feet wide, and having in "the deepest part nine feet of water at the lowest state of the river. "From measurements of this section, carefully taken at two different "periods, in May, when at the minimum, and in July, when much "increased by freshets, it appears from calculation, that at the first "period, the loss of water from the river was 28,178 cubic yards per "minute, and at the latter observation, as much as 85,840 cubic "yards. The main current being thus suddenly weakened, the motion "of the water becomes sluggish, and the natural effect is, that "deposites of sand and mud are formed, which gradually augment "where the movement of the water is feeble. Trunks of trees, and "other floating bodies grounding in these, islets are formed by succes-"sive aggregations, which soon become covered with rank grass, "reeds, and other herbaceous plants of rapid growth. A great number "of these mounds have been thus raised, and the progress of formation "is continually going on. The usual methods of clearing the beds of "rivers could here be applied with facility and good effect, as the "accumulations are nothing more than silt and sand, with occasional "logs buried underneath. A dam across the Colorado branch, con-"structed on such of the well known plans as might be judged the "most efficient, would be indispensible. The reinforced body of "water, aided, if necessary, by the resources of art, would, by the "momentum of its increased velocity, soon clear a channel to the "depth that should be deemed requisite. Other parts of the river "where such operations might be wanted, could be improved by

"nearly similar methods, as the bottom is even where composed of "mud and sand, except about the rapids, where it is rock or loose "stones."

Mr. Stephens, in his tour, became acquainted with Mr. Bailey, and in his "*Travels in Central America*," presents all the information with respect to the Lakes, river, and route beyond the Lakes to the Pacific, that he was able to collect. Mr. Stephens passed over the route from the Lakes to the proposed terminus at Realejo, on the Pacific, but did not see the Rio San Juan. Of the latter, however, he speaks as follows:

"The length of the river by measurement, with all its windings, "from the mouth of the Lake to the sea, is ninety-seven miles. There "are no cataracts or falls: all the obstructions are from rapids, and it "is at all times navigable, both up and down, for piraguas drawing "from three to four feet water.

"From the Lake to the river of Los Salvalos, about eighteen miles, "the depth is from 1 1-2 to 2 fathoms. The river is then clear for four "miles, with an average depth of from two to four fathoms. Then "come the rapids of the Old Castle, but little more than half a mile "in extent, with water from two to four fathoms. The river is clear "again for about two miles, with water from two and a half to five "fathoms, where begin the rapids of Mico and Las Balas, connected "and running into each other, and both together not more than a mile, "with water from one to three fathoms. Then the river is clear one "mile and a half to the rapids of Machuca, which extend a mile, and "are the worst of all, the water being more broken, from running "over a broken bottom. The river then runs clear and without any "obstruction, for ten miles, with water from two to seven fathoms, to "the river San Carlos, and then eleven miles with some islands "interspersed, with water from one to six fathoms, to the river Sera-"quea, the measurement of one fathom being about the points or bends, "where there is an accumulation of sand and mud. It then continues "seven miles clear, with water from two to five fathoms, to the Rio "Colorado. The river Colorado runs out of the San Juan in another "direction, into the Atlantic.

"The loss to the latter according to measurement taken in the "month of May 1839, was 28,178 cubic yards or water per minute, "and in the month of July of the same year during the rising of the "waters, it was 85,840 yards per minute, which immense body of "water might be saved to the San Juan by damming up the mouth of the "river Colorado. From this point there are thirteen miles of soundings "of from three to eight fathoms. The bottom is of sand and mud and "there are many small islands and aggregations of sand without trees, "very easily cleared away. The last thirteen miles might be reduced "to ten, by restoring the river to its old channel, which has been "filled up by collections at points of drifted matter. An old master "of a piragua told Mr. B.—that within his memory trees grew half "a mile back. The soundings were all taken with the plotting scale "when the river was low, and the port of San Juan, though small, Mr. "Baily considers unexceptionable. * * * This river has an "average fall of one and six-sevenths feet per mile to the Atlantic. "If the bed of the river cannot be cleared out, a communication can

"be made by either lock and dam, or by a canal along the bank of the "river. The latter would be more expensive; but on account of the "floods of the rainy season it is preferable."

These extracts are sufficient to show the character of the river, and to determine the feasibility of a canal the whole length of the St. John's river. We now proceed to give a description of Lake Nicaragua, which as we shall show is navigable for ships of the largest class. Mons. A. Gariella found as many as forty five fathoms in the middle of the lake.

Mr. Baily says:

"The Lake of Nicaragua or Grenada is ninety geographical miles "long, its greatest breadth is forty, and the mean is twenty miles; "the depth of water is variable, being in some places close to the "shore, and in others half a mile from it two fathoms, increasing "gradually to eight, ten, twelve, and fifteen fathoms, the bottom "usually mud.

"This basin is the receptacle of the waters from a tract of country "six to ten leagues in breadth on each side of it, thrown in by "numerous streams and rivers, none of them navibable except the "river Frio, having its source far away in the mountains of Costa "Rica, which discharges into the lake a large quantity of water near "the spot where the river San Juan flows out of it. The embouchure "is 200 yards wide, and nearly two fathoms deep. There are "several islands and groups of islets in different parts of the lake, "but none of them embarrass the navigation, nor is this anywhere "incommoded by shoals or banks, other than the shallow water in "shore; and even this is but very trifling, or rather it is no impedi-"ment at all to the craft at present in use, the practice being to keep "the shore close aboard for the purpose of choosing convenient "stopping places at the close of the day, as they scarcely ever con-"tinue their voyage during night.

"The largest islands on the lake are Amotepe, Madeira, and "Zapatera, taken together the first two of the islands are twelve "miles long, Zapatera is almost triangular and five miles long, "Sanate, Salentinane, and Zapote are smaller and uninhabited but "some of them and the last in particular are capable of cultivation. "Near the town of Grenada there is the best anchorage for ships of "the largest dimensions."

Lake Nicaragua is connected with Lake Leon or Managua by the Tipitapa river the length of this river is about sixteen some say twenty miles, and has a fall between the two lakes of 28 feet. Mr. Stephens states that the whole fall is comprised within the first six miles of the river descending from Lake Leon, M. Michel Cehvalier distributes it as follows: eighteen feet at the cascade of Tipitapa and the remaining ten feet between the cascade and Lake Nicaragua. M. Garella estimates that one lock for the first twelve miles between Lake Nicaragua and the cascade would be necessary to deepen the river. Mr. Lawrence states that the river has a depth of from three to eighteen feet to the cascade, and that the fall at Pasquiel is only thirteen feet.

In relation to this river Mr. Baily says:

"The Lake Nicaragua is connected with that of Leon by means of

"the river Panaloya (or Tipitapa) navigable for the boats imployed "in that country for twelve miles as far as the place called Pasquiel, "where the inhabitants go to cut and bring away Brazilian timber. "The four miles which remain between that place and the Lake of "Leon are not navigable by any kind of boat, whatever may be its "construction, because beyond Pasquiel the channel is obstructed by "a vein of rocks, which, when the river is swollen, are covered with "water; but in the dry season, the water sinks so low that it can "only escape through gradually diminishing fissures in the rocks. "At the distance of a mile beyond this first vein of rocks, we find "another more solid, which, crossing the river at right angles, forms "a cascade of thirteen feet descent. The river Tipitapa, which dis-"charges itself into the Lake of Nicaragua is the only outlet for Lake "Leon. The lands bordering on this river are somewhat low, but "fertile, having excellent pasturage; at Chontales, they are divided "into grazing and breeding farms. All this country covered with "Brazilian timber is scantily inhabited. The only village is that of "Tipitapa, situated near the above mentioned waterfall. It contains "a small church, and about 100 cottages. The river is crossed by a "wooden bridge."

Lake Leon or Monagua is thirty-five miles long and sixteen at its greatest width. The most of the water is received from the circumjacent country chiefly flows from the eastern coast, but all the streams that fall into it are small. The soundings of Mr. Lawrence would not make it as deep as Lake Nicaragua. But Mr. Garella makes it still deeper. In the middle of the lake stands the conical shaped island of Monotombito. On its northwestern shore rises the volcano of Monotombo, which usually sends forth smoke. It is conceded by all that the lake affords sufficient water for ships of the largest class.

The western extremity of Lake Leon is within fifteen miles of the Pacific and twenty-nine from the harbor of Realjo the point where most of the surveys have fixed for the terminus of the proposed canal; others have fixed on the Gulf of Fonseca or Conchagua some thirty miles further north for its terminus, and which we now believe is received with more favor. The plain of Nicaraugua extends north from the table lands of Costa Rica. The eartern portion is nearly flat, the west is more undulating. A range of hills extends on the extreme west of it from Costa Rica in a north west and south east direction towards the Pacific. Where these hills approach Lake Nicaragua there are several volcanoes. Farther to the northwest between Lakes Nicaragua and Leon the hills gradually lower and disappear opposite the northwestern extremity of Lake Leon, and are succeeded by low and level plains twelve or fifteen miles wide to the Pacific. To the north of the Bay of Fonseca rise volcanoes. The highest intervening point between Lake Leon and the Pacific is on the bank of the lake (and is only fifty five feet six inches above the level of the lake.)

The calculation of Mr. Baily makes the Lake Nicaragua 128 feet three inches above the level of the Pacific at low water and full moon; Lake Monagua 28 feet 8 inches above the level of Nicaragua and the most elevated summit between Lake Mauagua and Realjo 55 feet 6 inches. Total height of the summit level 212 feet 5 inches. M. Garella makes the difference between high water in the Pacific and low water in the Atlantic 19 feet 6 inches. This will make the summit level above the Pacific 231 feet 11 inches.

The length of the route will be as follows:

Canal from Port St. Juan to Lake Nicaragua, -	194	miles.
Lake Nicaragua, - - - -	90	"
Canal of river Tipitapa, - - - -	20	"
Lake Managua, or Leon, - - -	35	"
Canal from Lake Leon to Realejo, - - -	22	"
Total length that route, - - -	278	miles.
Or, according to Mr. Baily, - - -	264	miles.
From which deduct length of lakes, - -	125	"
Length of canal according to Mr. Baily, - -	139	miles.
According to Mr. Lawrence, - - -	153	"

Should, however, the lower portion of the San Juan, (as it is supposed it can) be made navigable for ships, say 70 miles, the length of the canal will be reduced to 83 miles.

From Lake Managua to Rio Tosta, eleven miles, but one lock would be required. In the next four miles, about 200 feet would have to be overcome by lockage, from which the descent of the plain is gradual to the Pacific. The principal streams that would be encountered are Rio Tosta, San Juan El Cacao, and the Estero Real, would afford abundant water for the canal.

The harbor of Realejo is unquestionably one of the best on that part of the Pacific coast. Capt. Sir Edward Belcher, of the Royal Navy, surveyed it in 1838. He says:

"It has two entrances, both of which are safe, under proper "precaution, in all weather. The depth varies from two to seven "fathoms, and good and safe anchorage extends for several miles. "The rise and fall of the tide is eleven feet, full and change in three "hours and six minutes. Docks or ships, therefore, may easily be "constructed, and timber is readily to be procured of any dimensions; "wood, water, and immediate necessaries and luxuries, are plentiful "and cheap."

Juarras, in his history and geography of Nicaragua, says that the harbor is capable of containing 1000 ships; and that the village of Realejo was founded by the companions of Alvarado, but abandoned because of the frequent attacks of the Buccanneers.

Mr. Stephens, in his Travels in Central America, says of this harbor:

"Rested and refreshed I walked down to the shore. Our encamp- "ment was about the centre of the harbor, which was the finest I saw on "the Pacific. It is not large but beautifully protected, being almost "in the form of the letter U. The arms are high and parallel, running "nearly north and south, and terminating in high perpendicular bluffs. "As I afterwards learned from Mr. Baily, the water is deep, and, "under either bluff, according to the wind, vessels of the largest class "can ride with perfect safety. The harbor was perfectly desolate, "for years not a vessel had entered it; primeval trees grew around "it, for miles there was not a habitation; I walked the shore alone. "Since Mr. Baily left, not a person had visited it, and probably, the "only thing that keeps it alive, even in memory, is the theorising of

"scientific men, or the occasional visit of some Nicaragua fisherman, "who, too lazy to work, seeks his food in the sea. It seemed prepos- "terous to consider it the focus of a great commercial enterprise; to "imagine that a city was to rise out of the forest, the desolate harbor "to be filled with ships, and become a great portal for the thorough- "fare of nations. But the scene was magnificent. The sun was "setting, and the high western headland threw a deep shade over the "water. It was, perhaps, the last time in my life that I should see "the Pacific, and in spite of fever and ague tendencies, I bathed once "more in the great ocean."

Mr. Stephens, to whom Mr. Baily politely furnished all the surveys and plans for a canal, makes the following estimates of the cost of the work.

From the Lake Nicaragua to summit level	8 to 10	million dollars.
From summit level to Pacific, -	2 to 3	" "
From the Lake to Atlantic by canal along the bank of the San Juan, - -	10 to 12	" "
Total estimate, - - - -	20 to 25	million dollars.

There are various other projects for canals to terminate at the Gulf of Nicoya and the Gulf of Papagayo south of the harbor of Realejo, and at the Gulf of Fonseca or Conchagua to the north. Sir Edward Belcher of the Royal Navy first proposed the latter. His plan was to pass behind the Volcano Monotombo and proceed northward until convenient ground could be found to descend to the plain and terminate the canal on the Gulf of Fonseca. This we believe is now the favorite route, but we have no surveys or estimates of its cost. In fact it is admitted that all the routes proposed are practicable; actual surveys must determine that which is best.

III. *Isthmus of Panama.*—All the surveys for a canal across the Isthmus, agree in pronouncing the project one of great difficulty, if not entirely impracticable. In 1827 and 1828 by order of General Bolivar, Messrs. Lloyd and Falmarc were employed as engineers, to make a survey of the route across this Isthmus. Lloyd lost his life in the undertaking, and sickness and death broke up and dispersed the commission before the work was completed, only a reconnoisance having been made, the report of which was unfavorable to the project. In 1842 Senor Moro says:

"The Isthmus of Panama, is again being explored, but it has been "lately estimated, that even if the work be at all practicable, its "accomplishment would require the united efforts of the principal "nations of the world, and an expenditure of at least 200,000,000 "francs."

M. Garella the French Engineer, who, under instruction from his government made a survey of this route, reported the length of the route to be canalled 30 miles the highest summit 177 feet, but that no supply of water could be had at the summit level. To obviate this, otherwise fatal objection, he preposed to make a tunnel, the cost of which he estimated at $7,700,000. Baron de Humbolt who is good authority in such cases, and who personally has some knowledge of the route, and had at one time at least great faith in its practicability,

as late as June of last year in a note appended to "Plateau of Caxamarca" in his "*Ausichten der Natur*" has these remarks:

"As the taken possession of a considerable of the west coast of the "New Continent by the United States of America and the report of "the abundance of gold in New California have rendered more urgent "than ever the formation of a communication between the Atlantic "States, and the regions of the west through the Isthmus of Panama, "I feel it my duty to call attention once again, to the circumstance "that the shortest way to the shores of the Pacific, which was shown "by the natives to Alonso Martin de Don Benito, is the eastern part "of the Isthmus, and led to the Golfo de San Miguel." Again,

"General Bolivar, at my request, caused an exact levelling of the "Isthmus between Panama and the mouth of the Rio Chagres to be "made in 1828 and 1829 by Lloyd and Falmarc. Other measurements "have since been executed by accomplished and experienced French "Engineers, and projects have been formed for canals and railways "with locks and tunnels, but always in the direction of a meridian "between Portobello and Panama, or more to the west, towards "Chagres and Cruces. Thus the most important points of the "eastern and southeastern part of the Isthmus have remained unex-"amined on both shores. So long as this part is not examined "geographically by means of exact but easily obtained determinations "of latitude and of longitude by chronometers, as well as hypsomet-"rically in the conformation of the surface by barometric measure-"ment of elevations,—so long I consider that the statement I have "repeatedly made, and which I now repeat in 1849, will still be true, "viz: "that it is as yet unproved and *quite premature* to pronounce "that the Isthmus does not admit of the formation of an Oceanic "Canal."

The just inference then, is, that the project, though not impossible, is impracticable, unless that a better route than any yet surveyed should be discovered. Humboldt supposes such a route to exist at or near the terminus of the Isthmus, and calls for an exploration of this part of the Isthmus. He says that he has frequently been applied to for his opinion relative to the feasibility of constructing such a canal, by European capitalists, and that he has uniformly given them but one answer, pointing them to the portion of the Isthmus where it is deeply indented by the Golfo de San Miguel, into which the Rio Tugra, with its tributary, the Chunchunaque, fall, and complains that his advice has never been followed.

We doubt entirely whether any such route exists, although it is a fact that the separating mountain ridges here sink into hills. It is very probable that no great obstacle, here as well as elsewhere on this Isthmus, exists to the mere construction of a canal; but that there are no means of supplying it with water at the summit level. We are confirmed in this opinion, because Mr. Wheelright and his associates, who, by the aid of the British Government, have established steamers from Panama to the west coast of South America, and from Jamaica to Chagres, and who have crossed the Isthmus in all directions, have abandoned the idea of an oceanic canal, and only look to a railroad connection. All agree that to a railroad there are no serious obstacles.

which has been undertaken by American citizens, and is now in progress of execution.

IV. *Rio Atrato, and Rio San Juan de Cauca.*—This route is not now spoken of, although the fact is, here already exists a water communication between the two oceans by the Raspadura canal, which connects the waters of these rivers, and is navigable for piraguas for five months in the year. The mouths of the San Juan on the Pacific not having any good harbor for shipping, would be a serious obstacle; but if everything else were favorable, this, perhaps, might be obviated by leaving the San Juan soon after it passes the mountains, and cutting a canal to Buenaventura, where there is an excellent harbor on Choco Bay. It would, however, be necessary to canal the whole distance from ocean to ocean, which would be very expensive, and when accomplished, could only be used by the smallest vessels.

It will thus be seen that the Isthmus of Nicaragua, as far as known, presents the only practicable route for an oceanic canal. Not only so, but this is the only route where all the material and labor can be procured on the spot for the construction of the work. Labor is abundant and cheap, the price per day being only half a real, (six and a fourth cents,) and the country, except the lower San Juan, the healthiest on the continent. The Isthmus of Panama is a charnel-house, and but thinly settled; while the Isthmus of Tehuantepec is almost an unbroken wilderness. Should even canals be practicable over either of the latter Isthmuses, the labor for their construction would have to be brought from abroad, and which of itself would be a fatal obstacle to the undertaking.

Having thus presented all the facts respecting an oceanic communication by canal across the continent, and finding that the only practicable route falls in the line, and passes through the Mosquito country, as defined by Lord Palmerston, we have a key to the otherwise unaccountable conduct of the British Government in the Mosquito farce. Her recent outrages in that quarter of the globe, in seizing upon Tigre Island, near what will be the western terminus of said canal, and which was ceded to the United States for the express purpose of protecting said work, leave no doubt of her original design, namely, of securing to herself the exclusive right and control over the work.

It may be a question of policy whether we as a nation shall assert the Monroe doctrine relative to European colonization on the Western Continent. That declaration was made when the sun of Spanish Independence and liberty had just emerged above the horizon, and when sister Republics over the whole extent of Spanish America, were ushered into being. The valor, wisdom and moderation they manifested in throwing off the yoke of oppression and organizing their political institutions, gave promise of a glorious future. Statesmen and philanthropists indulged in glowing visions, and bright speculations, upon the future condition of the continent, under the sway of a leagued and united chain of Republics from Canada to Patagonia. Under this view it was that Monroe made the celebrated declaration. But since then how things have changed! Those bright visions have all faded, and the promised fruit has been blighted in the bud. Anarchy

and confusion have reigned instead of law and order, imbecility instead of power; and deterioration, instead of progress. To assert the doctrine of Monroe, we would have to grapple with Europe single handed, without the aid and perhaps even without the sympathy of the anarchical governments of Spanish America. We therefore say that it may be a question of policy, whether we will feel ourselves called upon to vindicate and assert the declaration of Monroe, under all occasions, and maintain the inviolability of every inch of American soil, under the changed condition of things. But one thing is certain where any encroachment by any European power is made for the purpose of circumventing us, and hindering the free expansion of our energy and enterprise, such encroachment will be met with spirited and determined resistance.

ART. III.—THE LICENSE LAWS OF MISSOURI.

Commerce, it is admitted, has been an important and efficient element in the progress of civilization, and must so continue, whilst society remains constituted as it now is. Through its instrumentality nations of every clime, tongue, kindred and creed, have been drawn into friendly contact—exchanging various commodities, one with the other—and thus gradually have each imbibed some portion of the civilization, customs, habits, arts, and ideas, of the others. Hence many old prejudices, contracted views, and false notions, have been made to yield before the advancing car of a higher intelligence, guided by the genius of commercial enterprise. Fraternal intercourse has been extended, adverse opinions reconciled, and war, to some extent at least, has "*smoothed his wrinkled front.*" Nations can no longer rely upon it as an element of power for the accumulation of national wealth, prosperity and aggrandisement: commerce and the civil arts are now the great agents of wealth, as well as of intellectual and moral improvement.

The advance of the christian civilization has been steadily onward, unfolding new beauties as the mental and moral vision of society has enlarged—its advocates are found in every land, its voice is heard in every tongue. In this glorious mission commerce has been an efficient agent in opening the way to that friendly intercourse between all nations, so necessary to the introduction and extension of the christian religion.

If we turn to the early history of commerce in modern Europe, we shall find, with few exceptions, that it was governed by arbitrary and exacting laws, administered by despotic rulers. But, as civilization advanced, and liberal views became more dominant, and intelligence among the mercantile classes increased, the restrictions upon commerce decreased in the same proportion, so that we may now affirm

it to be in accordance with the spirit of the age to approximate as near an unshackled commerce as the domestic policy of nations will permit.

Experience has shown that an active, enterprising, free and enlightened commerce is an important stimulant to the arts and industrial pursuits, as it facilitates the exchange of the commodities of every country and clime. A pursuit so necessary to the advance of civilization, affording so many advantages to a state or nation, should we conclude, receive their attention and fostering care, upon principles of state policy, economy, and interest, if not of equity and justice; yet, such has not been the policy of Missouri in relation to her trade and commerce.

In earlier days all pursuits of industry were under more or less restraint. A license, or privilege from the government or ruler was necessary to the exercise of almost every occupation; but these restrictions were gradually removed, with the exception of those on the professions of law and medicine, on commerce, and, such pursuits and occupations as were deemed prejudicial to the morals and good order of society. Considering the immense responsibility devolving upon the lawyer and physician in regard to property, reputation, health and life, society may be well excused for requiring some evidence of worthiness of so great a trust as that reposed in the lawyer and physician—honesty, capacity and skill, may be well enquired into, as upon these may depend the dearest objects of life. It may also be well enough for police regulations to license dram shops, &c., though we consider this a very questionable policy. For, if a business or occupation is wrong in itself how can a certain sum of money or bonus paid to government, as a price for the privilege of following it; make it right, or lesson its immoral tendencies upon the community. But we cannot perceive how a license to merchants and grocers can add to the safety, morals, or general well-being of society; as no other qualification is required of them than the payment of the tax.

Agriculture, the mechanic arts, and commerce, are the three great and essential industrial elements in the progress of civilization—intimately connected and mutually dependant one upon the other they are silently but surely performing their respective parts in the great social drama. The two former, have no statute restrictions upon them now in the shape of licenses. A farmer, mechanic, artist, or manufacturer, is not obliged to procure a privilege from government to follow his business. Why should the merchant, trader, or grocer, be required to do so? Why make such an invidious distinction between these important pursuits? Why should the merchant or grocer be subject to indictment, fine and imprisonment, for the non-payment of his taxes in contradistinction to other citizens, do justice and equity demand it? or is it necessary to the well being of society as a matter of police regulation? We think not. No one pretends to assert that it is. Then why pursue a course of policy towards this class of our citizens indicative of distrust, insulting to their integrity and dignity as freemen, fixing upon them a badge of distinction, tending to degradation in the social scale? We hold that such discriminations and distinctions between citizens in the mode and manner of taxing property, are not in harmony with the spirit of American institutions,

and certainly repugnant to the letter of the Constitution of Missouri, which requires "THAT ALL PROPERTY SHALL BE TAXED IN PROPORTION TO ITS VALUE."

Taking it for granted that there is no good reason why merchants and grocers, should be licensed for police purposes, and considering too, that by the act of the last General Assembly; the license system was reduced to the advalorum principle—and, considering also, that there is now an advalorum tax, besides the licenses, upon all goods, wares and merchandise, we may well ask where is the necessity or justice, in retaining the license system at all? Why resort to two distinct methods to collect revenue from the same species of property, unless it was intended by the Legislature to evade the constitutional provisions requiring "that all property shall be taxed, in proportion to its value?"

"The 10th section of the act of 25th March, 1845, provides that the collector shall collect, as an additional tax, such per centum upon all merchandize offered for sale as aforesaid (except such as may be offered in the packages, boxes, bales, barrels, or crates, in which they were imported, or in which they may have remained without being broken,) such an amount as may, for the time being, (be levied) *paid* as tax upon real estate."

The act of the 27th March, 1845, imposed a tax of one-sixth part of one per centum upon both real and personal estate; equal to sixteen and two-third cents on every hundred dollars of value. This law is still in force. But the exception in favor of packages, &c., contained in the 10th section above recited, was repealed by the act of March 12, 1849, which read as follows:

"1. Where the amount of merchandize received for sale by any merchant or grocer, shall amount in value to as much as five hundred dollars or less, the tax shall be one dollar; where the amount of merchandize so received shall amount in value to more than five hundred dollars, and not exceeding six hundred dollars, the tax shall be one dollar and twenty-five cents; where the amount of merchandize so received shall amount in value to more than six hundred dollars, and not exceeding seven hundred dollarss, the tax shall be one dollar and forty cents; and so on in the same proportion, increasing the tax at the rate of twenty cents for every additional one hundred dollars worth of merchandize so received.

"2. The provisions of the preceding section shall be applicable to all merchants, commission merchants and grocers, whether trading as wholesale or retail dealers: *Provided*, that nothing in this act shall be so construed as to repeal the tenth section of an act entitled 'An act to license and tax merchants,' approved March 27th, 1845, so far as the same relates to the collection of an ad valorem tax upon all merchandize offered for sale as aforesaid.

"3. All acts and parts of acts inconsistent with, or repugnant to this act, are hereby repealed.

"This act shall take effect from and after the first day of June next."

The law of 1845 requires that the license shall be renewed at the end of every six months.

By an an act passed by the General Assembly on the 14th March, 1849, it is declared that "all monies invested in the trade, and products of this State, whether the same be on hand, or sent off for sale, shall be subject to tax.

Thus stands the revenue law of Missouri in respect to merchants and commerce at the present time; and although much ingenuity seems to have been displayed for the purpose, as we suppose, of evading the constitution; yet, if we must have a license system, we prefer the present to the former. This bears with equal force upon all whose stock exceeds $500, that, was unequal and favored the large dealer. But we object to the system because it is not in accordance with the genius of our institutions, but is based upon arbitrary distinctions not recognized by the people of this country. We object to it because we believe it to be a gross violation of the constitution of the State,—unjust and oppressive in its operations, and detrimental to our commercial prosperity.

In proposing to abolish this system we have not lost sight of the fact that there must be a sufficient revenue raised to defray the current expenses of the State and keep down the interest on the State debt—nor would we reduce it below that standard. We believe that by equalizing taxes upon all property a sufficient revenue may be raised without increasing the taxes upon real estate, or any other class of property. But we will suppose that in abolishing the system it does become necessary to increase the taxes a trifle upon all property would the great mass, the *producers* and *consumers*, of the country, be injured or loose any thing by it? undoubtedly not. They pay it now; and though indirectly it is not the less a burthen. The wholesale merchant first pays it, the retailer next pays not only the wholesale license but his own in addition, making a double license, all of which must be paid by the consumer. Again, the purchaser of produce in the interior is taxed on his purchases from the farmer, and the purchaser of the same article in St. Louis, if he be a merchant or grocer, pays another tax upon the same commodity; thus, three, four, five, or perhaps six licenses may accumulate upon the same commodity before it gets into the hands of the consumer.

Now, when we reflect that the larger portion of the various commodities entering into the commerce of the West, are articles of necessity, going to supply the common and immediate wants of the great laboring and producing classes, it will be perceived that this tax assumes the form of a burthen upon them of no inconsiderable amount, and should not be persisted in except from necessity.

One argument, in favor of the system, in the minds of some, is that a large portion of the consumers, dependant on the commerce of St. Louis for supplies, are citizens of other States, and that from them we thus get a large amount of State revenue, which is so much relief to our own citizens. This proposition to the superficial may appear to be of some force; but we look upon it as unsound and dangerous—repugnant alike to the true interests of St. Louis and the State at large; and, if persisted in, may transfer the seat of trade and commerce to some other point in the Mississippi Valley; for although St. Louis occupies a central and important location in this great valley, and though she has prospered almost beyond conception and example here-

tofore, yet, in this age of commercial intelligence and enterprise—in this country of freedom, talent, and genius, guided by a spirit of emulation, such as the world has never seen before, we have no reason to suppose that she will continue to maintain her advantage and supremacy under such a system of nigardly policy. The intelligent citizens of other States will not uphold it if Missourians do. They will found another St. Louis on the great "*Father of Waters*," with more liberal laws—a broader and more comprehensive policy. It becomes, therefore, the duty of every citizen having at heart the interests of the State, and who would not thwart the noble destiny of St. Louis, to seriously consider of the best plan of approximating a policy more liberal in its character—more worthy of the dignity and character of the State—more consonant to the genius of our people, and the extraordinary growth and future greatness of our city. If we are true to ourselves, St. Louis has nothing to fear from competition in future time. She must be the great city of the American Continent. But to achieve so great, prosperous, and bright a destiny for her, a policy commensurate with that destiny must be pursued.

We believe that it is only necessary for our merchants, grocers, and others, to make one general and united effort to rid the State of the license system, and it is achieved. Let them address the next General Assembly respectfully, but firmly, and demand justice at their hands —demand that equality, as men and citizens, to which they are entitled.

Before closing this article, we beg leave to call public attention to a serious mistake promulged through the public newspapers of Illinois and Iowa, and not denied, as far as we have seen, by those of Missouri. This mistake was to the effect that *products, the growth or manufacture of other States*, were subject to a license or tax not imposed on those of Missouri. This is an error. There is no such law now in force. It was repealed by the act of the last General Assembly; so that now there is no such discrimination. The products of Missouri are subject, not only to the same license or tax as those from sister States, but a greater, as we will show before we close this article; for, although by the provisions of our revenue laws, the products of our own State are subjected to the same rate of taxation as those of other States, yet we hold that according to the Constitution of the United States, and the decisions of the Supreme Court, no State possesses the right to impose a tax, by license or otherwise, upon goods, wares, or merchandize imported from foreign countries, or from a sister State, and sold by wholesale, bale or package, except what may be absolutely necessary for executing its inspection laws.

This point was decided in the case of Brown against the State of Maryland, (12 Wheaton's Reports, page 419.)

Story, in his commentaries on the constitution, (vol. 2, page 516) says, "no State is at liberty to pass any laws imposing a tax upon importers, importing goods from foreign countries, or from other States. It is wholly immaterial, whether the tax be laid on the goods imported, or on the person of the importer. In each case it is a restriction of the right of commerce, not conceded to the States. * * Sale is the object of importation; and it is an essential ingredient of that intercourse, of which importation constitutes a part. As Congress

has the right to authorize importation; it must have a right to authorize the importer to sell." Again he says: "It is no answer, that the tax may be moderate; for, if the power exists in the States, it may be carried to any extent they may chose.

These authorities cover the whole ground, and are full and clear in support of the proposition, that the law of Missouri authorizing a tax to be levied upon the products of other States sold here by wholesale, bale or package is unconstitutional, and, consequently not binding upon our citizens. And hence the brilllant scheme—if such was ever designed—of raising a revenue from the commerce of other States falls to the ground; and the products and commerce of Missouri is made to bear the burthen alone.

As Journalists, we have discharged our duty in placing, as we believe, the subject upon its true ground, for the benefit of our readers. In Missouri, the question is one of State policy, it depends on the citizens themselves whether they will retain or alter it. There is ample time between now and the next General Election to discuss the objectionable features of the present revenue laws, and if the people are just to themselves we think the next General Assembly will put an end to the present cause of complaint.

ART. IV.—ST. CHARLES COUNTY, MISSOURI.

In the number for October last, we took a birds-eye view of the Point prairie and vicinity of St. Charles city; and the same glance might be extended throughout the county, accompanied by many reminiscenses, by the way, which would add much of interest to many localities passing under review: let us turn aside from this pleasing duty and lay hold on one of more stern reality—that of searching out, and holding up to public view, the resources of St. Charles county, but even this duty, apparently a mere detail of dry statistics, may admit of an occasional offset from the 'tangent' of our narrative, which may afford some relaxation to the mind while engaged in its perusal.

In the first place, then, we will consider the Point below St. Charles, —its soil, productions and convenience to market.

This section of the country has an alluvial soil, of from five to ten feet in depth, with sufficient sand to render it light and easy of cultivation.

The bottom lands, on the Mississippi and Missouri rivers, are covered with a heavy growth of timber—such as oak, walnut, cotton-wood, ash, sycamore, honey locust, hickory, pecan and coffee nut—all valuable for plank and rail timber; together with a variety of kinds valuable for fire-wood. A large and profitable business is done

in wood, on the rivers, by supplying steamboats and rafting and boating to St. Louis.

These timbered lands are on what is called the first bottom, which is very fertile, producing every variety of grain &c., raised on the prairie.

The prairie is partly divided by the Marias Croche, and south of this lake is called the Kitzac prairie, which together with the bottom,* was inundated by the flood of 1844, causing great destruction of property, but is again assuming its wonted appearance as an agricultural district. The main prairie is on a bench, or second bottom, a large portion of which was above the great flood of '44 and is considered to be, essentially, the garden spot of the country, if not of the State; —the soil producing a most luxuriant crop of every species of produce congenial to this latitude—wheat, corn, rye, barley, oats, millet, hemp and flax: the grasses, and all kinds of fruit, vegetable and root crops in the greatest perfection. There has been raised per acre, forty-five bushels of wheat, one hundred of corn, seventy of oats, and so on in like manner of other articles; but, owing to our western mode of cultivation, these figures are above the average yield.

The produce of the Point is hauled to St. Charles, where is found a ready market for wheat and a portion of all other articles, or to either of the rivers, (Mississippi and Missouri,) and shipped to Alton and St. Louis.

Rails, for fencing, are obtained partly, in the bottoms, and partly, rafted down the Mississippi and Missouri rivers, from whence a short haul will place them on the ground to be enclosed. Most excellent well water is found at from twenty-five to thirty feet beneath the surface of the earth, and rock for walls and cellars boated from the Illinois side of the river, or hauled from St. Charles and the Mamelles. Cisterns are much cheaper than wells, the water more pure and healthful to drink, and cemented only, will cost from ten to fifteen dollars per one hundred barrels of water.

Dog prairie, through which passes the Salt river road, is the next in rotation and point of fertility. The name of this prairie is derived from a circumstance that occurred in the early settlement of the country. At a certain gathering of the men for some neighborhood purpose, the dogs got into a snarl and commenced fighting, and soon all of the bipeds present joined in, and the result was—a general melee and bow wow: since which time it has been known by the above, though from the orderly character of its citizens and fine soil it deserves a better name—and would propose that it be known hereafter by that of—"Richland prairie."

This is a rich and beautiful upland prairie gently undulating and produces an average of twenty bushels of wheat per acre, forty or fifty of corn—tobacco and an abundance of every other crop. It is surrounded by rich, arable timbered land, and lies between Peruke creek and Cuivre† river, its produce is shipped down Cuivre which is navigable for small boats about fifteen miles, and the Mississippi rivers or hauled to St. Charles.

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*Portions of the bottom were not covered with water.

†Pronounced Borrack and Quiver.

Leaving this prairie the soil changes—it becomes more shallow with a tenacious clay subsoil.

Next comes Allen's prairie, which lies south of Flinthill a small village containing two or three stores, several mechanics of different branches, and a very handsome new church. Proceeding west we come to Graves' prairie: thence, crossing south of the head waters of Peruke creek, comes Hickory Grove prairie, on which stands Pauldingville and through which place passess the Boonslick road. Produce from these prairies is hauled to St. Charles or shipped down Cuivre river.

Passing thence, in a southerly course are Tuque's and Thornhill's prairies which are separated by Dardenne creek, and east is Howell's prairie lying between Dardenne and Femme Osage creeks. Lastly comes Dardenne prairie, situated centrally of the west end of the county and through the whole lentgh of which runs the Boonslick road. This prairie is north of Dardenne creek, and generally on the divide between it and Peruke.

The seven last named prairies are large, gently undulating and afford very extensive and beautiful views: they are surrounded by extensive forests of timber suitable for building-plank, rails, fire-wood; and limestone and other rock for building materials.

The soil, of these last named prairies, is generally such as that described after leaving Richland prairie,—wheat not a certain crop, ten to fifteen bushels per acre—but does better when the land is manured, ploughed deep, and the grain sowed early in the fall. Those who have sub-soiled their land succeed best. Corn thirty or forty bushels, oats a heavy crop, always, timothy does well, but clover is uncertain; buckwheat succeeds finely but is not extensively grown. Invariably, the adjoining woodlands produce better wheat and a fine article of tobacco, which is extensively planted in some parts of the county.

Baugh and Wolf are small prairies, one by one and a half miles, but are said to be rather better for wheat than some of the larger ones.

The valley of Femme Osage, and Darsts bottom on the Missouri river, are very fertile—yielding heavy crops of corn, wheat, hemp, tobacco, oats, timothy, clover, &c. Green's bottom, on the Missouri river, naturally very fertile, was much injured by a deposit of sand during the overflow of '44.

The last section to be noticed is, the celebrated Black-jack region, extending from the city of St. Charles ten or twelve miles, forming the sector of a circle from north to south west, on the periphery of this arc of a circle and on the southern bank of Dardenne creek, stands Cottleville and through it passes the Boonslick road. This is a very fertile region, and will scarcely yield to any country in the production of wheat, corn, oats, timothy, clover, &c. It also contains some mines of stone coal.

Taken altogether, St. Charles is one of the best wheat growing counties in the State of Missouri; and, if attention were particularly turned that way, would yield to none in raising stock—horses, mules, cattle, hogs, and sheep, in which latter article much business is already done, and at fair profits. As an example of what the county might do, and is doing, in the cattle and hog line: Femme Osage and

Darst's bottoms have in them about one thousand head of fat cattle, waiting a rise in the market; besides having fed two thousand head of hogs. Feeding is a business followed by many persons throughout the county; but, situated as we are, convenient to navigation and market, our citizens are enabled to take advantage of prices, either for grain or stock, and sell or feed their grain, as may best suit their notions of finance; and this is particularly applicable to the Point. Our neighbors of the adjoining counties have learned the advantage of being convenient to market, and many droves, during this winter, have been driven here, where food is plenty, and fed until a suitable opening in the market, and then in two or three days could be placed in the hands of the packer at St. Louis.

There are still large tracts of both timber and prairie lands lying idle, which could be purchased at from two to ten dollars per acre. These lands afford a fine summer range for stock. Improved farms can be bought at from three to twenty-five dollars per acre. There is but little public land in the county of much value, except it be for pasture and timber; and this is mostly confined to the low lands of the river, or to the broken, hilly country bordering on the Femme Osage creek. These lands contain much valuable timber---such as black, white, post and red oak, hickory—also lime, soap and sand stone are found in these hills. Specimens of iron ore are to be met with, and no doubt other minerals abound. Coal has been found in lumps on the ravines of Peruke, near its head waters; but at no other place in the county except near to St. Charles. This is owing, no doubt, to the fact that a search has never been made with that object in view.

A very successful experiment has been made in the culture of the castor bean; the yield is large, and affords a handsome profit—our soil is well adapted to its growth. The sumach is indiginous to our soil and climate, and grows luxuriantly in a wild state. It might be cultivated as an article of commerce, as it commands a fine price in the east. The vineyard has received some attention by the Germans of this county, and an article of wine produced, which is said, at least once, to have taken a premium at St. Louis.

The crab apple and plum grow wild in great quantities, and in their season, our prairies are literally strewed with fine strawberries. All kinds of cultivated fruit do well — apples, peaches, nectarines, apricots, and the almond tree, bear a full crop.

The "Pomona" nursery, on Baugh's prairie, contains the prettiest lot of apple trees to be found in this State, or in Illinois. The proprietor's method of preventing his fruit orchard from being injured by the "curculio," is, in the spring to sow it down in oats, and by the time the fruit begins to fall, the hogs are turned in, and there fattened during the fall and winter. Under this practice, the insect never injures the fruit. Others who have tried it are equally successful. He also states that he has succeeded in raising per acre, at the rate of eleven hundred and ninety-six bushels of artichokes: this is furnishing food for hogs at a very cheap rate.

Rice, the seed of which was first brought from South Carolina, has matured here for the two last successive seasons; but on a very small scale. The cranberry, no doubt, could be introduced here, and raised for family use.

Taken altogether, our county is in a prosperous condition. Substantial dwellings, school-houses, and churches are being erected all over the county. But one thing has been too much neglected, and which, if attended to, would add much to the appearance of our already beautiful prairies—that is, the use, on the outside of dwellings, of the paint and white-wash brushes.

There is a great demand for mechanics of all kinds. We are in want, nearly all over the county, of grist and saw-mills—carpenters, blacksmiths, shoemakers, wagon and ploughmakers. Some portable saw-mills have been introduced, which, when there are a sufficient number, will work a revolution in our mode of fencing.

Where rails have to be hauled several miles, with the present cost of two and a half dollars per hundred, a plank fence, when it can be had, is decidedly the cheapest; and even a wire fence, with posts twelve feet distant, and eight strans of No. 9 wire is cheaper than the old fashioned worm fence. This is allowing the same distance to haul the materials, in each case, and includes only the cost of delivering them on the ground.

Dardenne, Femme Osage, and Peruke creeks have on them several grist and saw mills. On Femme Osage is a carding, spinning, and fulling-mill. There are in the county several other wool-carding machines.

On Darst's Bottom, (Missouri river,) there are some natural curiosities. The first is a sycamore tree, which has withstood the storms of many ages, and looks as weather beaten as an old *Tar*. This tree is hollow, with an opening at the base into which a man can ride, and it is said that two men have been inside on horseback at the same time, with sufficient room to turn round and ride out again.

The next is more strange than curious. A single tree, and the only one known in this country, of the Bois d'Are, (Osage orange,) stands on the edge of the bottom, at the mouth of a small ravine. It has half a dozen trunks, which put out from the ground, eight to twelve inches in diameter, forty feet in height, and bearing fruit; but it is thought the seed do not mature. There is no sign of a single sucker to be seen shooting up from its spreading roots; and this fact makes it more valuable for hedging purposes. The wood of this tree is very tough and durable, and is much used by the Indians for making bows; it also dyes a beautiful yellow. The seed from which this tree sprang is said to have been left by the Indians in a moccason, at their camp, where it was found by some of the old settlers and planted, not knowing what it was till very recently.

The third, and last, is certainly one of the greatest natural curiosities within the State. Near the base of a rocky cliff, which is perpendicular, and two hundred feet in height, shoots up a column to the height of about one hundred and sixty feet! Erected by the Great Architect of the universe—as a specimen of durability and grandeur, it stands firmly as the everlasting hills!

Its figure is that of the frustum of a pyramid, whose base is a rectangular parallelogram, and the mean of its sides twenty-eight by sixteen feet. This measure was made at the apex of the debris, from the main cliff, which is about half the height of the column. At this height, the space between the column and the face of the cliff, is four

feet; and, at the apex of the column, the distance is apparently ten or twelve feet. The cliff, and side of the column which faces it, are straight and smooth, leaving no indication that this mighty column was ever united to the main cliff. The material, of each, is a grey friable sand stone. On the face and summit of the cliff are numerous cedars; and upon the summit of the column, there stands a living cedar, fifteen or twenty feet in height! and a dead cedar stump, four or five feet high, with sprigs of dead grass about their roots. The summit is, perhaps, ten or twelve feet square. From this spot, the intervening forest prevents a view of the Missouri river. In many places, there is no accumulation of debris from the cliffs, and we see evident indications that the Missouri river, at some anterior period, rolled past—and washed the base of—*The Cedar Pyramid.*

Three State roads, besides that to Alton, lead into the city of St. Charles, and along these roads have passed through our county for St. Louis, since the first day of October last, about twenty-five thousand head of stock; and this is exclusive of those fed in our own country.

St. Charles has its mill which manufactures two hundred barrels of flour per day—its saw and grist mills, merchants and mechanics; but still needs for its future prosperity something more. It must have a slaughtering and packing establishment; a tobacco inspection, in short, she must set up for herself. Every manufacturer, mechanic and non-producer, who settles down amongst us, adds so much towards providing a home market for the produce of the farmer. We of the west, are not troubled how to make more blades of grass to grow, but rather how to find a market for those already on hand; the true secret of which, is to build up manufactures in the heart of the region which produces the food and raw material.

ART. V.—RAILWAY FROM ST. LOUIS, TO THE WESTERN BOUNDARY OF MISSOURI.

In the last number of the Western Journal we published a list of the railway charters granted by the General Assembly of Missouri, during the session of 1848-9; but at the time when that list was sent to press we had no expectation that any step would be taken, at an early day, towards the commencement of the road from St. Louis to the western boundary of this State. For, notwithstanding that we, in concert with a few others, were instrumental in procuring the charter, yet, we entertained but little hope that the work would be commenced in many years, or at least until Congress should determine to construct the great Pacific railway. This charter was obtained without being asked for by the citizens of any part of the State.

The measure was brought before the Legislature, as we are advised, by two members of that body from the city of St. Louis, who conceived that the charter might, possibly, in some way, be made to effect and promote the project of a railway to the Pacific ocean. As no one out of the Legislature had applied for the charter it met with little opposition; and its authors were allowed to frame the bill in conformity with their own views: and consequently it is as liberal in its provisions, and as favorable to the interest of the stockholders, as they could reasonably desire.

Thus brought into existence, this charter remained unobserved, and almost unknown, by the people, even of St. Louis, until within a few days past, when our enterprising and well judging citizen, Thomas Allen Esq., one of the directors named in the charter, moved in the matter, and brought the subject before the public. The success attending this movement has, to the present time, far exceeded our most sanguine expectations. The books were opened on the fourth day of the present month; and at the close of the first week the subscriptions amounted to $305,500 dollars. This amount, however, may appear small to those unacquainted with the circumstances connected with the subject; but to us it affords strong evidence, not only that the work will be commenced at an early day, but that it will be prosecuted with energy.

It has been said that the delay on the part of some of our large property holders in subscribing for stock, evinces, not only a distrust in the enterprise, but a want of public spirit also: such remarks, we think, must be regardod as ill timed. The movement was not anticipated: the proposition to commence the work was brought forward suddenly, and it was not to be expected that men who have never engaged in works of this nature, and whose means are profitably employed, would subscribe for stock without taking time to deliberate. When the merits of the enterprise shall have been fully discussed, and, its influence on the value of property in St. Louis, and along the line of road, is properly appreciated, we may then expect to see our cautious and well judging capitalists the most efficient supporters of the work. The directors, we think, acted wisely in resolving to cause a topographical and geological survey of the route, to be made without delay. The result of these explorations, if as favorable as we anticipate, will be calculated to bring forward subscribers of that class who look alone to the prospect of large dividends; and if it can be shown that the stock will be as safe and more profitable than mortgages, the completion of the work will be placed almost beyond contingencies.

We will not affirm that this road will pay dividends, satisfactory to capitalists immediately after it is opened for business; but we are fully persuaded that it will, before the lapse of many years, become one of the best paying roads in the United States. The main stem will pass through, or near, the iron beds of the Merimac and Osage valleys, and over the cannel and bitumenous coal deposites of the central and western counties of the State; and it is highly probable that the transportation of these two articles alone, will, at no distant day, pay a fair profit on the stock; for, by a few short branches, every part of the rich mineral region of south Missouri could be penetrated;

and who can assign a limit to the amount of tonage that will be drawn from that quarter?

This road will constitute the base of an extensive system that is destined to embrace a portion of the State of Arkansas, Texas, and the fertile region west of our own State, as far north, at least, as the valley of the Kansas. In all this region, St. Louis has no rival; and it only requires a glance at the map to convince the mind that a large portion of the produce, general commerce and travel of this vast region, must pass over some part of this road. It would be folly to undertake to show by figures, the amount of tonage and travel that this extensive country will afford. We know that it abounds in mineral wealth, consisting chiefly of those articles most necessary and useful; it contains an extensive area of fertile soil, productive in almost every article necessary to human subsistence and comfort; and, withal, blessed with a salubrious climate. These facts are more reliable than figures; they were impressed on the earth at the time of its creation, and will remain fixed as long as it endures.

In looking to the sources of profit, we have taken no account of the travel to New Mexico, Deseret, California, and Oregon, that must pass over this route; for, although this travel will constitute a large item in the business of the road, we have preferred placing the calculations of profits upon the resources of our own State. And, notwithstanding, we have strong confidence that sooner or later this road will constitute a link of the great Pacific Railway, yet we would not urge this as the principal inducement to subscribe for stock: the enterprise possesses sufficient merit without connecting it with a contingency.

But what will the work cost, and how are the means to be raised to construct the road? These are important inquiries. The first can be answered, with sufficient accuracy for all practical purposes, by the Engineer when he shall have completed his survey and estimates; the latter cannot be so readily solved. Two hundred and fifty miles may be assumed as the length of the line of road; and twenty thousand dollars as the cost per mile,—making the entire cost five million dollars; this, we think, is not far from the truth: but how is so large a sum to be raised? We are authorized to conclude, from what has already been done, and from opinions expressed by men well acquainted with the population of St. Louis, that the subscriptions of individuals here will extend to $500,000 at least; and, that stock to the amount of $500,000 will be taken by the city, in its corporate capacity. Here is $1,000,000 to commence with.

The road will pass through about nine counties, and we feel persuaded that if the subject is properly presented to the citizens of those counties, they will, in their corporate capacities, subscribe at least the amount of one million dollars. No one, we think, who will give the subject the slightest consideration, can doubt that it will be to their advantage to give liberal encouragement to the work.

If the effect produced on the value of real estate in other parts of the Union can be regarded as a criterion, we should hazard little in affirming that the lands, in the several counties through which the road will pass after leaving the neighborhood of St. Louis, will be enhanced one hundred per cent., in value, by reason of its location. And it would not be long before the increase in the value of taxable

property would be sufficient to pay a large portion, if not the entire interest, on the money invested. But supposing this should not be the case, yet, these counties would suffer but a temporary inconvenience, which would only continue until the road shall have been completed; for then, we think, their stock will be worth what it cost, and they can sell, or keep it, as may best suit their convenience.

The next resource to be looked to is an application to Congress for a donation of public lands. Many applications are now before Congress for lands in aid of railway and other improvements; and none, we think, can present stronger claims to assistance from the Government than the Pacific Railway. This road will pass through three land districts, in which there were on the first day of January 1849, 10,141,757 acres of public land; and, besides this, there remained at that date, 14,559,804 acres of unsold public land in the two southern districts, amounting in all to 24,701,561 acres of Government land, all lying south of the Missouri river, excepting, perhaps, from one to two million acres, the most of which has been in market for many years: surely it would advance the interest of the Government, as a land holder, to give five per cent. of this land for the purpose of constructing rail ways through it.

And furthermore, the completion of this road will greatly facilitate the construction of the great Pacific railway, provided it should commence on our western line. Were these considerations fairly presented to Congress we confidently believe that it would grant at least 1,000,000 acres of the unsold land in Missouri in aid of this road. This land, if judiciously selected and managed, might be sold by the time the road shall have been completed for at least one dollar per acre; and probably at one dollar and fifty cents. Here, then, is the sum of $3,000,000, which, we believe, can by active exertions on the part of its friends be brought to the aid of this work.

And should Congress make a liberal donation in favor of this enterprise it would so increase the value of the stock as to cause it to be sought for, and the consummation of the work would be secured beyond all doubt,

That St. Louis will do her part we have no doubt; but it is necessary to arouse the citizens along the line. The people of the west, especially of Missouri, are not generally informed upon the subject of internal improvements; and, are consequently incapable of appreciating the immense advantages which they afford. It is therefore the duty of the friends of the road to stir them up. Let some intelligent individual visit the counties along the proposed route; and canvass the subject before the people; this course has been pursued in other States with signal success, especially in Tennessee and Alabama; and it will succeed in Missouri likewise, if undertaken by the right kind of individuals.

The following is a copy of the act of incorporation:

AN ACT TO INCORPORATE THE PACIFIC RAILROAD.

Be it enacted by the General Assembly of the State of Missouri as follows:

"§ 1. A company is hereby incorporated, called the Pacific railroad, the capital stock of which shall be ten millions of dollars, to be divided into shares of one hundred dollars each; the holders of which, their successors and assigns, shall constitute a body corporate and politic

and by the name aforsaid shall have continued succession, may sue and be sued, plead and be impleaded, defend and be defended against, and may make and use a common seal, and shall be able in law and equity, to make contracts; may take, hold, use, possess and enjoy the fee simple or other title in and to any real estate, and may sell and dispose of the same; may make by-laws, rules and regulations proper for carrying into effect the provisions of this act, not repugnant to the constitution or laws of the United States, or of this State, and shall have the usual and necessary powers of companies for such purposes.

"§ 2. John O'Fallen, Louis V. Bogy, James H. Lucas, Edward Walsh, George Collier, Thomas B. Hudson, Daniel D. Page, Henry M. Shreve, James E. Yeatman, John B. Sarpy, Wayman Crow, Joshua B. Brant, Thomas Allen, Robert Campbell, Pierre Choteau, junior, Henry Shaw, Bernard Pratte, Ernst Angelrodt, Adolphus Meyer, Lewis A. Benoist, and Adam L. Mills, or any nine of them, shall constitute the first board of directors under this act, and shall hold their offices until their successors shall be qualified; they shall meet at such time and place as shall be designated by any three of them, and organize as a board of directors, and when organized they shall cause books to be opened for the subscription of the capital stock of said company, at such times and places as they may designate, under the supervision of such persons as they may appoint, and may continue them open so long as they may deem proper, and may re-open such books, when necessary, until the whole stock shall be subscribed.

"§ 3. So soon as two thousand shares shall be subscribed the directors shall cause an election to be held for nine directors, at such time and place as they may appoint and give notice of in two or more public newspapers.

"§ 4. An election for nine directors shall be held on the last Monday in March, in each year, and if not held on that day, an election may be held at any other time that the directors shall designate; the election shall be held under the supervision of one or more stockholders, and the persons receiving the highest number of votes shall be elected, and shall continue in office till their successors be qualified. Every stockholder shall be entitled to one vote for each share held by him, and he may vote by proxy; soon after their election the directors shall meet and elect one of their number president, who shall hold his office for the term for which he was elected director, and until his successor shall be qualified.

"§ 5. The directors shall appoint, agents, clerks, engineers, superintendents, and other officers and servants for said company; shall keep a journal of their proceedings; shall cause correct books and accounts to be kept; they may determine by by-laws what number of directors shall constitute a quorum; and may appoint committees, and fill all vacancies in any office under said company; they shall fix the salaries of the president, and the officers and agents; but no director shall receive any compensation for his services as such. They may take security from their officers and agents, and may adopt such measures and do such acts as will be best calculated to promote the prosperity and usefulness of said company.

"§ 6. The directors shall make and advertise calls for the payment of the capital stock, at such times and in such manner as they

may deem proper, and if any stockholder shall fail to pay any such requisition within ten days after the time appointed, the said company may recover the same with interest, and if not collected may declare the stock forfeited and sell the same; and no delinquent stockholder shall vote in said company.

"§ 7. Said company shall have full power to survey, mark, locate, and construct a railroad from the city of St. Louis to the city of Jefferson, and thence to some point in the western line of Van Buren county in this State, with a view that the same may be hereafter continued westwardly to the Pacific ocean; and for that purpose may hold a strip of land not exceeding one hundred feet wide, and may also hold sufficient land for the construction of depots, warehouses, and water stations; and may select such route as may be deemed most advantageous, and may extend branch railroads to any point in any of the counties in which said road may be located.

"§ 8. Said company may take voluntary relinquishments of the right of way for said road, and the necessary depots and water stations; and if the land through which such road shall pass shall belong to minors, in whole or in part, the guardian or curator of such minor shall have power to convey to said company so much of the land as may be necessary for the purposes aforesaid, on fair and equitable terms; but every such conveyance by a guardian shall be subject to the approval or rejection of the probate or county court in which such guardianship is pending.

"§ 9. If any owner of any tract of land through which said railroad shall pass, shall refuse to relinquish the right of way for said road to said company, or if the owners be infants or persons of unsound mind, or non-residents of the State, the facts of the case shall be specifically stated to the judge of the circuit court of the county in which such lands are situated, and said judge shall appoint three disinterested citizens of the county to view said lands, who shall take into consideration the value of the land, and the advantages and disadvantages of the road to the same, and shall report under oath what damages will be done to said land or any improvement thereon, stating the amount of the damages assessed, and shall return a plat of the land thus condemned. Notice of such application to judge shall be given to the owner of such land five days before the making of the application, if such owner reside in this State, or to his guardian; and if such owner be a non-resident of this State, he may be served with actual notice, or by an advertisement for four weeks in some public newspaper.

"§ 10. The persons appointed to view and value such land shall file their report and plat in the office of the clerk of the circuit court of the county in which the land or a part thereof is situated, and if no valid objections be made to said report, the court shall enter judgment in favor of such owner against such company for the amount of damages assessed, and shall make an order vesting in said company the fee simple title of the land in such plat and report described; objections to such report must be filed within ten days after the same shall be filed, which objections shall be examined by said judge, in term time or vacation, and he may hear testimony and by judgment confirm said report, or may set the same aside and appoint three other

viewers, who shall proceed in the same manner and make their report, until a report shall be confirmed. In all such cases the court shall adjudge the costs of the proceedings according to equity, and the said court shall have power to make such orders and take such other steps as will promote the ends of justice between the owners of such land and said company.

"§ 11. Said company may build said road along or across any State or county road, or the streets or wharves of any town or city, and over any stream or highway; but whenever said railroad shall cross any State or county road, said company shall keep good and sufficient causeways or other adequate facilities for crossing the same; and said railroad shall not be so constructed as to prevent the public from using any road, street, or highway along or across which it may pass; and when said railroad shall be built across any navigable stream, said company shall erect a bridge sufficiently high on which to cross, or shall construct a draw-bridge, so that in no case shall the free navigation of such stream be obstructed. When any person shall own lands on both sides of said road, said company shall, when required so to do, make and keep in good repair one causeway or other adequate means of crossing the same.

"§ 12. Said company shall commence the construction of said road within seven years, and shall complete the same within ten years thereafter; and said company shall have general power to use, manage, control, and enjoy said railroad; shall determine what kind of carriages shall be used thereon, and by whom, and in what manner, and shall determine the terms, conditions, and manner in which merchandize, property, and passengers shall be transported thereon; and shall have power to construct and keep such turnouts, gates, bridges, culverts, tollhouses, depots, warehouses, causeways, and other buildings, machinery, and fixtures as may be necessary; said company may receive such tolls and freights as may be determined on by the directors, and shall keep posted up statements of the rates of toll and freight to be charged.

"§ 13. Dividends of the profits of said company shall be made annually, or oftener if necessary; but the directors may reserve or set apart a portion of the profits as a contingent fund to meet expenditures and losses.

"§ 14. It shall be lawful for the county court of any county in which any part of the route of said railroad may be, to subscribe to the stock of said company; and it may invest its funds in the stock of said company, and issue the bonds of such county to raise funds to pay the stock thus subscribed, and to take proper steps to protect the interests and credit of the county; such county court may appoint an agent to represent the county, vote for it, and receive its dividends; any incorporated city, town, or incorporated company, may subscribe to the stock to said railroad company, and appoint an agent to represent its interest, give its vote, and receive its dividends, and may take proper steps to guard and protect the interests of such city, town, or corporation.

"§ 15. At every annual meeting of said company the directors shall make to the stockholders an exhibit of the affairs and condition of the company. One seventh part in interest of all the stockholders

may call a meeting, by giving four weeks notice in two public newspapers.

"§ 16. When said road shall be completed the company shall file a plat thereof in the office of the Secretary of State; and the legislature may at any time require a statement from the company as to the progress of the work, the amount of business, and the receipts of the company; and the books and accounts of said company may at any time be investigated by a committee appointed by the General Assembly.

"§ 17. Said company shall keep a fair record of the whole expense of constructing said road; and at the end of fifty years the State shall be at liberty to purchase said road by paying to said company the amount at which it shall be valued, by persons to be mutually chosen by the State and by said company; but two years notice shall be given to said company of the intention of the State to purchase the railroad.

"§ 18. When any person shall cease to be a stockholder, he shall cease to be a member of said company.

"§ 19. If any person shall wilfully injure, obstruct, or destroy said railroad, or shall break, destroy, or deface any work, edifice, or other fixture or improvement belonging to said company, he shall be considered guilty of a criminal offence, and shall be punished in such manner as shall be prescribed by law, and shall also be liable to said company for all damages by it sustained.

"§ 20. The operations of said company shall be confined to the general business of locating, constructing, managing, and using said railroad, and the acts necessary or proper to carry the same into complete and successful operation.

This act shall take effect from its passage.

Approved March 12, 1849.

ART. VI.—SCIENTIFIC AND PRACTICAL AGRICULTURE.

We commend the following article to the perusal of our agricultural readers—and not to them alone, but to all who delight to contemplate the laws and economy of nature:

From the Genessee Farmer.

The most abundant mineral in the earth is flint, or silica, which forms sand, and will melt into glass if pure—an operation that is promoted by the combination of potash, soda, or lime. Silica constitutes an important element in the stems of all cereals, like wheat, rye, oats, corn, &c. Pure silicous sand is remarkable for its insolubility. It is, in truth, an acid formed by the union of fifty-two parts of oxygen, with forty-eight of an earthy base called silicon. This acid combines

chemically with alumina, which is the next most abundant mineral in nature, being the basis of clay. Silicic acid also unites with iron, lime, potash, soda, and magnesia. Having a weak affinity for these alkalies, and alkaline earth, carbonic acid in water from decaying mould, vegetables, or manure, attacks the insoluble silicates of potash and soda, and forms carbonates of those alkalies. These, like pearl-ash, are very soluble; and what is particularly worthy of note, they are capable of dissolving silica. Thus, if we boil finely powdered glass, which is an insoluble silicate, in a strong solution of potash, or of potash and soda, the glass will be dissolved, and may be applied to the roots of corn or wheat, in a way to enter their roots, and go to make the hard glassy covering on the stems of those plants. It is curious that these soluble silicates, which contain an excess of the alkali, should be changed into insoluble silicates of potash or soda, in Nature's laboratory within plants, by separating potash or soda from the silica deposited in the cuticle. The potash, so liberated, returns to the soil, and there dissolves more of the flint, needed to impart strength to the stem of the plant: precisely as bones enable animals to stand up on the earth.

It is worthy of remark, in this connection, that many soils which abound in sand, as in parts of Maryland, Virginia, North and South Carolina, and Georgia, lack even the insoluble siliciates of potash, soda, magnesia, and lime, to a degree. To such soils it is desirable to apply not only ashes, leached or unleached, but forest leaves, and such vegetable substances as abound in potash, as well as the other earthy food of cultivated plants. Thus, one hundred pounds of corn cobs will, as they rot, yield more potash to a soil than a like weight of buckwheat straw. Indeed, the component parts of all fertilizers, and of all crops, should be generally understood by husbandmen. A vast amount of labor is wasted in gathering poor or defective fertilizers, where good ones might be obtained at a much cheaper rate. I have briefly alluded to nitrogen, sulphur, phosphorus, and chlorine as volatile constituents of vegetable and animal substances, which, combined with hydrogen at the time organic bodies decay, rise into the atmosphere. They deserve a short notice as fixed mineral acids in rocks and earths.

When forty parts, by weight of oxygen, combine chemically with fourteen of nitrogen, fifty-four parts of *aqua fortis* (nitric acid) are produced. This acid, combined with potash, makes saltpetre, or nitrate of potash. This salt, as well as nitrate of soda, is involatile; and both are found in considerable quantities in hot climates, where vegetation grows luxuriantly, and rots as rapidly. It is believed by chemists, that electricity in thunder-clouds often serves to combine the oxygen and nitrogen of the air in proportions to form nitric acid, which falls to the earth in rains. Compounds of this acid are quite soluble, and, in all well drained soils, nitre and all the nitrates are prone to be washed away.

Twenty-four parts of oxygen combine chemically with sixteen of sulphur, and make forty of sulphuric acid, or oil of vitriol. Unlike nitric acid, this exists in granitic and other rocks, as well as the common loose earths. Its salts are very numerous. Combined with alumina and potash, it forms alum; with iron, it produces copperas;

with soda, it gives glauber salts; with magnesia, epsom salts; with copper, blue vitriol; with zinc, white vitriol; and with lime, gypsum. The sulphate of lime, or plaster of Paris, being less soluble than the other compounds of sulphuric acid, we usually find more of this mineral in soils—especially such as are properly drained—than alum, copperas, glauber or epsom salts. *Sulphur*, being an indispensable element in all crops and all flesh, I attribute the value of gypsum mainly to the sulphur which it yields to clover, peas, wheat, and other cultivated plants. In one hundred pounds of wool or hair, there are five of pure sulphur. If the food consumed by sheep and other animals contained not an atom of this ingredient, how could their wool, hair, muscles, brains, and nerves all abound in this element? Minerals that contain sulphur should be well husbanded. All sulphates are involatile but most of them are extremely soluble.

Five atoms of oxygen combine chemically with one of phosphorus, to make an atom of phosphoric acid. The atomic number of phosphorus is not clearly settled; some chemists making it 31.4, and others only half that number.

Phosphoric acid exists in earths as a phosphate of alumina, iron, lime, magnesia, soda, and potash, and often as double salts. Some of these salts are quite soluble—others not. The phosphate of lime, or bone-earth, is the most important. Suppose nature should organize crops of grass, grain, potatoes, and all the plants which we harvest, as well without a particle of bone-earth as with it? Living on bread, milk, and other food, alike devoid of this dissolved mineral, phosphate of lime, which *alone can make bone*, no child could have a bone in its body. I desire to impress on the mind of the reader this truth: a kind and All-wise Providence does not permit cereal and other plants used as food for man, and the higher classes of animals, to grow one degree beyond the supply of bone-earth in the soil. Such food would be worse than useless. If animals fail to find their proper nutriment in one place, God gives them power of locomotion to walk, fly, or swim to another place, and seek for it there. But, upon a stalk of corn has organized a cob, and a few kernels at its base; if the stock of raw material fails, no more kernels can possibly grow. If they did, and lacked the elements that a pig must have to form bone, brain, and flesh, it would be mighty poor corn for pigs or children to eat for bodily nourishment.

In one hundred pounds of dry common salt there is about sixty pounds of chlorine. When free, it is a heavy, green, and very pungent gas. Some thirty-six parts of this combined with one of hydrogen, form in water, muriatic acid, or hydro-chloric acid, as it is now more commonly called. As a class of minerals, the chlorides or muriates are very soluble, like the chlorides of sodium, or common salt. They do not abound in soils. Common salt has been used as a fertilizer some three thousand years—both soda and chlorine entering into the composition of all or nearly all crops. Most quadrupeds are extremely fond of salt; and all civilized people season their daily food with it. It is curious that potatoes and wheat cannot be salted enough while growing; and that no degree of salting a fatting steer will suffice,

so that a little added to a fresh steak will not be an improvement. "Ye are the *salt* of the earth," has not less an agricultural than a moral meaning.

With regard to the value of lime, magnesia, potash, soda and iron, in organizing cultivated plants, perhaps nothing need be said. I have never anylized a soil that lacked iron; like silica, iron is not always in a soluble and available form. The practical farmer should understand that such constituents of plants as are soluble, a few years tillage and fair drainage render scarce; and such as are ordinarily insoluble, without the aid of decomposing, mold or vegetables, cease in a great degree to yield their nutritive atoms to famishing crops. Bear in mind that between forty and fifty cubic inches of water fall on every square inch of surface in the course of twelve months. If the ground has been cultivated, and really contains the food of plants in a soluble condition, this water will of course dissolve alike the organic and inorganic elements of vegetables. I have frequently washed from ten to fifty pounds of soil in pure rain water as it falls from the clouds, and then filtered and evaporated the water to see what substances were held in solution. I have never failed to get combustible and incombustible elements, and often nearly equal parts of each. By leaching fifty pounds of soil a few weeks with warm rain water, and then anylizing the matter dissolved out one can judge with some confidence of its defects and productiveness.

In studying the various processes by which the fertility of a cultivated field becomes impaired, I have been led to believe that much depends on the proportion of the water that evaporates on the earth where it falls, and that which runs off either on the surface or under it, into springs and rivulets, to form creeks and rivers. Deeply tilled land will absord twice as much rain water as shallow tilled will; and the former will retain twice as much to carry the crop through a drought, for evaporation at the surface of its numerous leaves, as will the latter. But most of the cultivated lands in the United States are neither tilled *deeply* or uniformly covered with *growing* vegetation, to absorb and fix in its tissues the dissolved food of plants.

The more the soil is stirred with the hoe, cultivator, or plow, the faster the elements of crops are set free by clemical action, and will be lost by solar evaporation, washing, and leaching, if such elements are not taken up by growing plants and retained to them. Berzelius found two organic acids in clear spring water, to which he gave the names of "crenic" and "apocrenic," from *krene*, the Greek for a "spring." River water always contains both the organic and inorganic food of plants. The quantity of the fertilizing atoms which is wasted in the planting States, is infinitely larger than one man in a thousand ever suspects. As a similar waste prevails at the North, only much less in extent, I desire to give a clear exposition of my views on this, the practical part of my theme.

Although both cotton and corn are planted early, and often gathered late at the South, yet cotton and corn-plants do not gain much in weight beyond four months for the former, and three months for the latter. During the first four or five weeks after the seeds germinate, the young plants are too small to imbibe any considerable quantity of nutritive matter of any kind from the soil. As they approach matu-

rity, they gain less and less in weight, and, of course, abstract less and less fertilizing matter from the earth or atmosphere. During the past season, I have watched with lively interest the organization or growth of corn, which yielded from five up to fifty bushels per acre. If I express the opinion that a crop of five bushels exhausted the soil about as much as one of fifty, some will esteem the remark about as sensible as to say that five sheep will eat as much food as fifty. The cases are not parallel. If a crop of corn, equal to the production of five bushels per acre, does not exhaust the soil as much as it would if ten times larger, the only reason that can be assigned is, that the elements of corn-plants are in truth not present in the sterile earth, to be removed. On poor land, it is found necessary to give each stalk three times more surface of earth to imbibe nourishment from, than on good land. When there is but a single plant to twenty-four square feet of surface, and that plant a very small one, my impression is, that even during the period when it grows the fastest, it fails to take in at its few small roots, more than a third of the available atoms evolved by the decay of the organic and the solution of the earthy food of the plant, within the square which it occupies. I will not say that all the gases and earthy salts derived from rotting mould and vegetables, and from dissolved lime, potash, soda, and magnesia, which fail to enter the corn-plant, are lost. But this I will say, that I see no reason to doubt the loss of most of these volatile and liquid atoms. I would about as soon have a field cropped ten years, and all the corn or cotton entirely removed, root and branch, as to have it well plowed and hoed ten years, and no vegetable whatever permitted to organize carbon, nitrogen, and the elements of water, and the minerals which form the ashes of corn, cotton, and wheat, in the field.

There are some seven millions of acres planted in cotton in the United States every year. And as the plant is little used to feed domestic animals, and most of its seeds are returned, after rotting, as manure, no crop should injure the soil so little. But the clean culture and long tillage which it demands, make it the most exhausting crop that is grown in the Southern States. As now cultivated, it wastes three times more food than it eats. And such is my judgment in regard to not a little of the corn and tobacco-culture which I have seen. I come now to the consideration of preventives and remedies.

To save from waste and loss the constituents of bread and meat, as they are climated by tillage, *they should be immediately organized in some living vegetable.* This is the process employed by Nature to renovate soils that have been impoverished by unwise cultivation, or by other means. It is the only way in which a soil can be made to increase in fertility, without adding fertilizers from elsewhere to it. Much as has been written on the subject of renovating poor lands, which have been injured by excessive cropping, and improving such as are naturally defective, the subject is very little understood. I have in my eye an old field which was scratched with the "bull tongue" plow and the hoe, a little longer than any crop would grow, and till its surface was as bare the year round as the desert of Sahara. A thin, spindling grass, a few stunted weeds and young pines have begun the work of making a new soil on this sterile waste. In this natural process of renovation the *pine* is the king of plants. Nature

has provided its seed with an apparatus which serves the same office performed by the down on the seed of thistles, *i. e.*, to enable it to be borne a great distance by winds in all directions. The seed of the pine no sooner germinates, than it extends its small tap root deep into the ground, in search of a very little of the alkalies and alkaline earths, without which it cannot organize carbon and the elements of water into woody fibre. Supplied at first with two green leaves and a small root, and mainly from nutritiment stored up in the parent seed, it is prepared to perform the legitimate functions of all growing plants, viz: to decompose carbonic acid and water by the aid of solar light, and with a little available nitrogen, potash, etc., to organize its tissues and gain in weight and substance. In forming ten pounds of common pine wood, nature deposits in its tissues and consumes from the earth not more soluble salts or *ashes* than can be got from a single pipe full of tobacco. And yet, wonderful to tell, I find four per cent. of ash in the dry leaf of the long leaf pine. But all these numerous and weighty leaves annually fall on the surface of the ground, to rot and form——— what? Why, a *mold*, rich in organized carbon; rich in salts of lime, potash and magnesia; the former taken from the atmosphere and the latter from the subsoil.

Here is the first letter of the alphabet in the science and the philosophy of accumulating bread and meat in the surface soil. Study the ways of Providence; wisely imitate His example, and a barren plain can be converted into a fruitful garden. The pine is an evergreen, and grows the year round.

The first thing I did when I came to Georgia, a year and a half ago, and saw the extreme nackedness of the land was to recommend the seeding with rye, at the last plowing in corn fields, or soon after the crop ceases to grow, with a view to have this winter plant gather up from August till March whatever available atoms might be within reach of its roots and leaves. As the earth does not freeze, and heavy, washing rains fall in winter, "the fat of the land" is largely consumed, and is either lost, like a burned candle, in the atmosphere, or carried like water from a dung-heap into ditches and "branches." Barley, oats, and wheat all do well here sown in November or December. It is now the 6th of February, 1849, and I have this day seen a field of oats which has been cut in part for soiling for some weeks. Another in barley, is so stout as to fall down or lodge.

Winter pastures of rye are very valuable for stock of all kinds, although there are some clayey soils that the treading of cattle and sheep injure.

Acting on my theory of keeping the earth always covered with some growing vegetation, Mr. M. B. Moore, of this city (Augusta,) raised last season 34 1-2 bushels of wheat from one seed,* which was harvested about the 10th of May: then a crop of hay, equal to a ton and a half to the acre, which was mown in August; and then a crop of peas, which was harvested in November; all from the same land. The land is now in wheat, to be harvested in May next, as before. There is no difficulty in growing three crops of small grain in a year at the South, if one is cut green for hay, as oats, peas, barley, and rye are often cut. To enrich the soil, I assume that manure derived

*Query. One acre?

from both the grain and straw or of the green crops, is all carefully saved and duly applied to the land. As about sixty per cent. of the hay and other food eaten by a cow, sheep, or horse is lost in vapor and carbonic acid, thrown out of the lungs in the process of breathing and through the pores of the skin in insensible perspiration, one will increase organic matter in a poor soil much faster to plow in clover, peas, timothy, and rye, than to feed these domestic animals, and apply all their excretions to the land.

I am well aware that clover has long been used in connection with wheat culture to enrich cultivated earth. It was a knowledge of this that led me to believe that to sow rye in corn, potatoe, and oat fields in autumn, to be plowed in for the feeding of the next summer crop, would be useful anywhere, north or south. I find that a kernel of rye will organize from October till the first of April, a plant which, when dry, will weigh one hundred times more than the parent seed. I call this gain of ninety-nine parts for one cheap manure, which is already evenly spread over the rye field, and ready for the plow in the spring. A man's farm is in truth a chemical laboratory, and he should study to turn the frosts of winter, the sunshine of summer, the rains of spring, and the dews of autumn to the best possible advantage. Very late plowing to freeze compact earths, and very early seeding, are worthy of attention at the North. I am in favor of pretty thick seeding and planting, partly as a better covering and protection to the soil and partly because I have generally found the best practical farmers to concur in recommending it. Under our present exhausting system of tillage there is far more land under plow in the United States than is really desirable or profitable. The correction of the evil of running over a great deal of surface to produce a little corn, wheat, cotton, or tobacco, is not to be expected during the life-time of the present generation. Boys may be made to understand that it is much cheaper to make five hundred bushels of corn on ten than on one hundred acres; but few men forty years old that practice the exhausting system now will ever pursue any other. Talk to them about carbon and the sub-soil, and they will soon fill both ears with cotton. Persons twenty years younger are generally willing to learn why one hundred pounds of pea vines will make richer vegetable mold than a like weight of bullrushes. Seeing that an acre of tilled soil, which gives about fifteen bushels of corn, has the same sunshine and an equal amount of rain and of atmospheric gases that fall upon an acre that yields sixty bushels, young men will study closely the slight difference in the two soils in their mechanical texture, the solubility of their fertilizing atoms, and in the abundance or scarcity of each constituent element. If *tillage, as an art*, was all that is required to give abundant harvests, then equal culture should be followed by equal crops on fields that produce the one five and the other fifty bushels per acre. No uniformity and thoroughness of tilth can work a uniformity in the growth of plants in soils that unequally abound in the precise things demanded by nature to organize the crop. To aid in decomposing insoluble silicates of potash, and in evolving sulphates, phosphates, and chlorides in compact, impervious clay, I have seen no one mineral operate better than lime. This is coming into pretty general use at the South to facilitate the renovation or im-

provement of old plantations. Gov. Hammon, who plants a few miles below Augusta, on the South Carolina side of the Savannah river, has used over 200,000 bushels of unburnt shell lime within the last ten years. I have witnessed its effect the past season with surprise. On well drained swamp lands its use is most marked and auspicious; although it is serviceable on dry uplands. Thorough draining is an indispensable preliminary to the improvement of ground that needs it. One man has twenty miles of ditches on his farm near this city. Peas are largely used to enrich land, by turning them under with the plow when in blossom. Deep plowing and subsoiling are gaining in the public esteem every month. Domestic animals are fed and kept much under shelter by skilful farmers, in order to save all their liquid and solid droppings from waste by solar evaporation and leaching by rains. Cow yards in the State of New York often sustain a great loss of the fertilizing elements to manure.

Good husbandry implies the faithful husbanding of all the elements of bread, milk, and meat in every change of form which these atoms undergo. Man is incapable of creating one new atom or of making an atom of sulphur perform the function of an atom of phosphorous, or one of phosphorus do the duty of an atom of lime or silica. If one third of the land that has been cleared of its native forest was back in woods again, and the other two-thirds cultivated in strict obedience to well known natural laws, the rural industry in the United States would yield a quarter more than it now does. It is impossible, while attempting to go over so much surface, not to waste valuable elements of crops at every turn on the farm. Land in pasture and meadow loses fertilizers far less than plowed fields, unless the latter are managed with skill in abstracting the constituents of plants from the subsoil and atmosphere, as well as from the surface soil. Wood ashes, both leached and unleached, bones and the contents of the vaults of privies should be worked up in compost heaps, rounding the bones and applying muck next to unleached ashes, so that the alkalies will neutralize the acidity of the vegetable matter. Cover rotting manure in plowing about as deep as you would a dead cat, to prevent the gases from escaping into the air. If you cover the carcass of the animal with coarse lumps of earth, it will smell badly; but pulverise these lumps fine, and the mellow earth will condense and retain the volatile atoms of the decaying cat. Take the hint and pulverize your soil deep and well, that moisture from below may rise freely, and gases and moisture from above descend without undue hindrance.

DANIEL LEE, M. D.

ART. VII.—WESTERN TOWNS.

DUBUQUE IN 1849.

The following statistics are extracted from the Miners' Express of December the 19th, 1849:

"Since the commencement of the present year, from eighty to one hundred brick buildings have been erected, including dwelling-houses and stores; many of them large and costly structures, and all of them such as to do credit to the proprietors, and to form ornaments to the town. Main street, where the principal business is transacted, has been greatly improved, and made to assume an appearance totally different from that presented at the commencement of the season.

"The improvements in the other streets are equally creditable to the enterprise, and indicative of the prosperity of our citizens.

"The mercantile and mechanical business of Dubuque is far more extensive than most towns of the same size, and may be summed up as follows:

"There are some twenty-two stores containing a general assortment of dry goods, clothing, groceries, &c., with stocks varying from ten to eighteen thousand dollars; One large wholesale and retail hardware store; two drug stores; two auction and commission merchants; one book store; eight fruit and provision stores; one boot and shoe store; two tinware manufactories; three bakeries; one large manufactory of confectionery; seven master builders; six plasterers; seven master bricklayers; four painters; two master stonemasons; one marble-worker; two saddle and harness manufactories; seven boot and shoe manufactories; nine tailor shops; three miliners and dress makers; three jewelers and watch makers; six cabinet and chair manufactories; five blacksmith shops; three carriage and wagon manufactories; two gun smiths; three cooper shops; five butcheries; one soap and candle factory; two livery stables.

"There are two large steam flouring mills, which, when in active operation, are able to make over two hundred barrels of flour a day. There is also a steam saw-mill, with two run of saws.

"There are three newspaper and job printing offices, from which are issued four weekly newspapers; two Whig and two Democratic; one of the latter in the German language.

"There are some eight or ten hotels and public boarding houses, besides a large number of private boarding establisements. Two of the hotels—the 'City Hotel' and 'Waple's House'—are large and elegant four story buildings, and afford to the travelling public the most ample and agreeable accommodations. 'Dickinson's Temperance House,' recently opened on Fourth street, is fitted up in excellent style by the proprietor, and offers the best of accommodations to

transient or permanent boarders. The 'Farmers' Home,' and the 'American,' 'Washington,' and 'New York' Houses are worthy of patronage.

"The learned professions are well represented in our city, both as to numbers and ability. There are eleven physicians, of various systems of practice: one dentist; seventeen lawyers; thirteen preachers of the gospel.

"The churches are, one Episcopalian, one Methodist, one Roman Catholic, one Congregational, one Christian, one Baptist, one German Congregational, and one German Methodist.

"The Roman Catholics have laid the foundation for a large cathedral on Main street, between Sixth and Seventh, which, when completed, will be one of the most magnificent buildings in the Western country. The cost is estimated at something over $100,000. It will probably be finished during the coming year. The Episcopaleans are now erecting a neat brick edifice on Locust street. It is in the Gothic style of architecture, and, when completed, will be a beautiful ornament to the city. The cost is estimated at some five thousand dollars. The Methodist society have made arrangements to erect, during the coming year, a much larger church than they now occupy, to be located on Main street, near the upper part of town. It is to be built of brick, and in a style which will do credit to the city. The Congregational church edifice has been very much enlarged during the past summer, so as to accommodate a very large auditory, and a large Lecture Room built in the rear, and the whole furnished in a most comfortable and elegant style.

"The offices of the General Government located at Dubuque, are, the office of Surveyor-General of the District composed of the States of Iowa and Wisconsin, in which some eight or ten Clerks are employed at salaries of from eight to twelve hundred dollars each, and a patronage of from fifty to seventy-five thousand dollars is annually dispensed; the Receiver and Register's office of the Northern Land District of the State of Iowa, and the office of the Judge of the United States District Court.

"The Free Masons have a Lodge and Chapter. The Odd Fellows, three subordinate Lodges, (two English, and one German,) and an encampment. The Sons of Temperance, one Division."

The population is estimated at near four thousand.

BOONVILLE, MISSOURI.

The *Boonville Democrat* of January 25th, 1850, contains the following account of the city of Boonville and its resources.

"Boonville is situated on the south bank of the Missouri river, 180 mile above its mouth, and 200 miles from the city of St. Louis. The location, for a commercial and manufacturing town, is one of the finest in the western country; being within 3 miles of the geographical centre of the State, and in the midst of a wealthy, and populous sec-

tion. Cooper county of which Boonville is the county seat, abounds in the very best cannel coal suitable for every kind of manufacture, with a large iron mine, which has never yet been worked. The land is mostly timber though with a sufficiency of prairie for the most extensive stock raisers,

"The population of the city of Boonville, in 1848 was 2,224, and since then it has been constantly and rapidly increasing. A number of new business houses have sprung up, from the time of taking the last census.

"The following is an abreviated statement of the business, and other houses: Dry Goods stores 8; Grocery stores 10; Family Groceries 4; 2 tin shops; 4 saddlery shops; 2 printing offices; 2 shoe stores; 2 carriage makers; 6 Blacksmith shops; 4 wagon shops; 2 Breweries; 3 Beer houses; 4 bakeries; 3 confectioners; 2 Hotels; 6 boarding houses; 1 Pottery; 2 tobaccoists; 4 Tailor shops; 6 Dram shops; 2 gunsmiths; 4 churches; 2 Druggists; 2 Bookstores; 2 Jewelry stores; 3 steamboat stores; 3 cooper shops; 3 cabinet shops; 12 lawyers; 8 Doctors; 3 Iron stores; 1 candle factory; 1 market house; 4 carpenter shops; 1 Iron Foundry; 2 Livery stables; 4 milliners; 2 Hatters; 8 shoemaker shops; 1 Tanyard; 1 barber shop; 1 steam Flouring mill; and 1 steam saw mill. The above may be relied upon as *strictly* correct, in every particular."

We regret that the Editor has not favored us with a statement of exports and imports, and other facts relating to the commerce and manufactures of Boonville. We desire to make our readers in other States acquainted with the agricultural, commercial and mineral resources of every part of Missouri; and our principal reliance, at present, for such information is upon the press in different parts of the State. Without such information the people of Missouri must remain ignorant of their own resources, and legislators incapable of originating and pursuing an enlightened policy.

EXPORTS OF BRUNSWICK, MISSOURI.

We are pleased to find that the enterprising editor of the Brunswicker has been able to make up a table of exports from that flourishing town for the year 1849. The table, however, would have been much more valuable had the amount of produce shipped at Brunswick by persons residing in the interior been included. We trust that in future some method will be adopted to ascertain the certain amount of shipments made at that place.—Editors.

Exports of Brunswick.—Through the instrumentality principally of Mr. McAshan, (firm of A. McMechan & Co.,) we have been enabled

to get up the shipping statistics of our town for the year 1849, the first ever offered to the public.

Articles.	1849.
Wheat, bushels	42,386
Lard, bbls	3,352
Pork, do	1,096
Bacon, casks	1,253
Tobacco, hhds	2,010
Hemp, tons	294
Tobacco, boxes	475
Flaxseed, bushels	1,546
Beeswax, lbs	50,426
Dry hides	3,177
Deer skins, bales	264
Furs, bales	221
Beans, bbls	86
Wool, sacks	57
Mustard seed, sacks	15
Hogs slaughtered this season	8,334
Beef cattle slaughtered this season	362

The amount of pork, lard, beeves, and bacon packed in the district, that ships at this place, is not considered in the above estimate. The produce shipped, shows a large increase upon the previous year's production. The growing importance of the Grand River country is striking—destined as it is, to be the best part of Missouri.

With regard to the steamboat register, the first steamboat that came up to this place was the Julia, on the 5th March. The last one down was the Amelia, on the 11th December—making the shipping season more than nine months long. The whole number of steamboat arrivals and departures was 534. Of this number, the packet Rowena, Capt. Jewett, made 44; the next best were the St. Joseph and Highland Mary, each 34. Fifty-five different boats were at this port.

GLASGOW, MISSOURI—ITS COMMERCE.

We extract from the Howard County Banner, the following statement of the commerce of Glasgow for the year 1849:

"*Exports of Glasgow.*—We have prepared with great care, the following statement of the quantities of produce shipped from this port during the past season of navigation, which, upon comparison with a similar statement made by us last year, shows a very handsome increase in the business of our thriving town.

Articles.	1848.	1849.
Tobacco, hhds,	3,194	5,230
" boxes,	4,531	4,047
Hemp, tons,	394	380

Articles.	1848.	1849.
Wheat, bushels,	36,312	21,670
Bacon, casks,	548	118
Lard, bbls,	500	259
" kegs,		320
Apples, green, bbls,	2,918	4,471
" dried, bushels,	2,250	4,089
Bale rope, coils,	744	1,250
Dry hides,	915	953

"In addition to the above, there have been shipped, of articles not enumerated in last year's statement, 350 barrels pork; 42 barrels beef; 578 bushels potatoes; 137 bushels barley; 15 sacks wool; 53 bales hay—an article never before exported from this place; 2,604 lbs. beeswax; and small quantities of various other kinds of produce.

"The number of tons of freight amounts to a little more than 6,000, which has been shipped at an average of 20 cents per hundred, for pound freights; $2 00 per hogshead, for tobacco; $3 50 per ton, for hemp; 8 cents per bushel, for wheat; and 35 cents per barrel for apples.

"The total value of exports is computed at $518,444.

"In the slaughtering business, there has been a decided increase this year. It is estimated that the number of beeves slaughtered will be about 150; and the number of hogs 5,000; of this there has been but very little shipped.

"The whole number of steamboat arrivals this season, has been 320. At the opening of navigation, there were four packets from St. Louis to Glasgow; two of these were burnt early in the season, after which there were but two boats in the regular packet trade."

From the Lexington Express.

STATISTICS OF THE CITY OF LEXINGTON, MISSOURI, FOR 1849.

Exports.—The following table exhibits a reliable statement of the Exports of this city, for the year 1849. We can vouch for its correctness, from the fact that the articles shipped were directly obtained from the duplicate bills of lading reserved by the shippers. This statement only includes the shipments made direct from the corporate limits of our city. Several of our business men, during the year, made large shipments of hemp, tobacco and bacon, from other landings in the county. We have good authority for stating, that at least twelve hundred tons of hemp were shipped from ware-houses in the county, above and below this city. For Lexington the shipments stand:

1,470	tons of Hemp, (in bales;)	8,550	pounds of Tallow;
12,375	coils of Bale Rope;	1,500	bushels of Flaxseed;
55	hogshead of Tobacco;	600	bushels of Castor and White Beans;
1,725,000	pounds of Bacon, (hams sides and shoulders;)	395	bales of Wool;
3,000	barrels of Lard;	255	bales of Feathers;

95,000	pounds of Dry Hides;	114	bales of Furs and Skins;
12,582	barrels of Superfine Flour;	500	bushels of Oats;
25,000	bushels of Wheat;	20	barrels of Alcohol;
17,000	pounds of Beeswax;	3	tons of Paper Rags;

Other articles of produce, of smaller value, were shipped, of which we have taken no account. As to the value of the above exports, we have not made an estimate; but we may safely say that the aggregate would exceed one half a million of dollars.

Imports.—The investments, for the year, in goods, groceries, lumber, machinery, &c., imported into the city, amount, in the aggregate, to $410,000. This sum we think to be correct, as the amount invested by each house, was solicited and obtained.

During the months of October, November and December last, 7,300 Hogs were packed or rendered into lard.

Upwards of 2,000,000 brick were made during the year and about 30 new buildings erected mostly of brick.

Schools.—The Masonic College, under charge of the Grand Lodge of the State of Missouri; Lexington High School, for young men and boys, by Wm. Van Doren; Mr. John Wilson, school for boys; Ingleside Seminary, for young ladies; Mrs. Greene's school for misses; Miss Blackwell's school for misses; Edgeworth Seminary, by Mr. Guthrie; Miss Livingston's school for girls; Mrs. Wilson's school for girls.

The Female College will commence its first session in the course of the coming spring.

Professions.—Attorneys at Law 18; Physicians 13; Portrait-painter and Daguerreotype Artist 1.

Churches.—Methodist 1; Baptist 1; Old School Presbyterian 1; Christian 2; Cumberland Presbyterian 1; Episcopal 1.

Hotels.—City Hotel, by J. J. Burtis; Monroe House by James Royle. Besides these, there are two or three houses of entertainment, and several excellent boarding houses. Livery Stables 2.

Monied Institutions.—Branch of the Bank of the State; Mutual Fire and Marine Insursnce Company, of Lexington, Mo.; Agencies for Phœnix, Home Mutual, and State Mutual Insurance Companies, of St. Louis.

Business Houses.—At this time we number, Dry Goods stores 16; Furnishing Stores 1; Commission warehouses and Boat Stores 4; Drug Stores 4; Book Stores 2; Tin and Stove Stores 4; Jewelry Stores 1; Furnishing Cabinet Ware Rooms 1; Lumber Yards 3. In the mechanical employments there are:—Blacksmith shops 8; Turners' shops 2; Machinist 1; Saddlers 4; Watchmaker 1; Carriage makers 2; Wagon makers 4; Carpenters' and Joiners' shops 12 or 15; Plowmaker 1; Painters and Glaziers 3; Tailors 5; Gunsmiths 2; Shoemakers 3; Stonecutters 1; Coopers 4; Barbers 2; Milliners 3; Bakeries 4; Tobacconists and cigar makers 2; Book bindery 1. There are also two printing offices, at which every variety of printing is executed.

Manufactories.—In the city and vicinity we now have 3 Steam Flouring Mills, 3 Steam Saw Mills, and one Steam Rope-walk, 2 Rope-walks propelled by horse power, and 2 factories for carding wool.

The population of the city is about 3,000. Upwards of 200 steamboat arrivals are reported. About $6,000 were expended on the streets, during the year, and something like $5,000 are appropriated for further improvements.

Public Buildings.—Branch Bank; Court-House and Jail.

We hear of several new buildings to be erected the present season. If hemp bears a fair price, and the season suitable for out-door work, the improvement in the city will be very considerable and of a permanent character. With the most beautiful and richest country surrounding it, this city is destined to reach a commercial importance, which will ever place her second only to St. Louis, in the State.

COMMERCIAL STATISTICS.

COMMERCE OF ST. LOUIS.

The following table, showing the monthly prices of eight leading articles in the St. Louis market, for the year 1849, are taken from the St. Louis Intelligencer:

MONTHLY PRICES OF TOBACCO.

January,	all grades,	None selling.	
February,	"	"	
March,	"	$1 50*a*7 00	per 100 lbs.
April,	"	1 50*a*7 50	"
May,	"	1 20*a*8 00	"
June,	"	2 50*a*9 00	"
July,	"	2 50*a*9 50	"
August,	"	2 50*a*8 00	"
September,	"	1 50*a*7 00	"
October,	"	1 25*a*6 50	"
November,	"	1 25*a*6 50	"
December,	"	1 25*a*6 50	"

MONTHLY PRICES OF HEMP.

January,	$120*a*122	per ton.
February,	120*a*123	"
March,	122*a*125	"
April,	122*a*125	"
May,	120*a*123	"
June,	120*a*123	"
July,	120*a*125	"
August,	122*a*125	"
September,	123*a*125	"
October,	123*a*126	"
November,	123*a*126	"
December,	122*a*125	"

MONTHLY PRICES OF LEAD.

January,	$3 75*a*3 80
February,	3 80*a*3 85
March,	4 00*a*4 10
April,	3 80*a*3 85
May,	3 95*a*4 00
June,	4 00*a*4 05
July,	4 05*a*4 10
August,	4 20*a*4 25
September,	4 20*a*3 25
October,	4 05*a*4 10
November,	3 90*a*3 92
December,	3 92½*a*3 95

MONTHLY PRICES OF FLOUR.

January,	4 20*a*4 25	per barrel.
February,	4 23*a*4 50	"
March,	4 20*a*4 25	"
April,	3 70*a*3 75	"
May,	3 75*a*3 80	"
June,	3 80*a*3 87 1-2	"
July,	4 10*a*4 25	"
August,	4 25*a*4 30	"
September,	3 30*a*4 45	"
October,	4 50*a*4 60	"
November,	4 50*a*4 75	"
December,	4 75*a*5 12 1-2	"

MONTHLY PRICES OF WHEAT.

January,	80*a*85c	July,	85*a*87 1-2c
February,	80*a*85c	August,	85*a*87 1-2c
March,	75*a*80c	September,	85*a*90c
April,	75*a*78c	October,	90*a*93c
May,	80*a*83c	November,	93*a*95c
June,	83*a*85c	December,	98*a*115c

MONTHLY PRICES OF CORN.

January,	30*a*32c	July,	36*a*38c
February,	30*a*32c	August,	36*a*39c
March,	25*a*27c	Septemher,	35*a*38c
April,	23*a*24c	October,	36*a*39c
May,	26*a*28c	November,	35*a*38c
June,	36*a*38c	December,	38*a*40c

MONTHLY PRICES OF BARLEY.

January,	50*a*55c	July,	55*a*60c
February,	60*a*62c	August,	73*a*75c
March,	75*a*80c	September,	73*a*76c
April,	75*a*80c	October,	105*a*110c
May,	70*a*75c	November,	73*a*76c
June,	60*a*65c	December,	73*a*76c

MONTHLY PRICES OF WHISKY.

January,	18*a*18 1-2c	July,	17*a*17 1-2c
February,	17*a*17 1-2c	August,	20*a*20 1-2c
March,	17 1-2*a*18c	September,	22*a*22 1-4c
April,	16*a*16 1-4c	October,	26*a*26 1-2c
May,	15 3-4*a*16c	November,	21*a*22c
June,	16 1-4*a*16 1-2c	December,	25*a*28c

Inspection of Whisky at St. Louis for each Month of the Year 1849.

	OHIO WHISKEY.		ILL. WHISKEY.		MO. WHISKEY.		IOWA WHISKEY.	
	Bbls.	Galls.	Bbls.	Galls.	Bbls.	Galls.	Bbls.	Galls.
January,	226	6,775	1,575	63,780	395	16,025	——	——
February,	——	——	1,632	65,735	198	7,926	——	——
March,	325	14,875	2,780	111,231	1,601	64,120	783	31,264
April,	259	10,160	3,386	135,585	1,015	37,788	214	8,336
May,	47	1,883	2,568	102,767	967	38,795	94	3,699
June,	——	——	3,720	148,742	1,265	50,671	167	6,670
July,	158	6,302	1,962	78,465	759	30,376	148	5,930
August,	254	10,076	2,460	98,416	1,275	50,007	226	9,048
September,	196	7,840	2,635	107,717	1,182	47,289	303	12,126
October,	407	16,265	2,507	190,273	1,262	50,458	206	8,235
November,	470	18,954	2,679	104,442	1,294	50,429	538	14,339
December,	25	1,006	2,090	83,600	1,083	43,250	453	18,126
Totals,	2,368	105,136	29,994	1,200,703	12,296	487,234	3,132	117,773

CUSTOM HOUSE STATISTICS.

Amount of Goods, Wares, and Merchandize imported and entered for immediate consumption; also, those withdrawn from Warehouse, upon which duties were paid at the Port of St. Louis, during the year 1849.

FROM BREMEN.

Articles.	*Value.*	*Am't of duty.*
23 pkgs. hardware	$2,344 00	$667 00
14 casks do	1,083 00	326 10
288 pkgs dry goods	6,476 00	1,506 15
139 do wine, &c	2,492 00	530 00
125 flag stones and 5 bales batting	508 00	89 50
7 kegs nails	78 00	43 40
5 pkgs groceries	105 75	4 70
25 do toys	2,636 00	792 80
Total from Bremen	$16,422 75	$3,969 65

FROM HAMBURG AND ANTWERP.

36 pkgs mdz	771 00	164 60
50 boxes and 10 bbls wine	365 00	226 00
20 bbls nails	170 00	51 00
Total from Hamburg and Antwerp	1,506 00	441 60

FROM HAVANA.

2,365 boxes sugar	value 43,494 00	12,718 20

FROM FRANCE.

120 pkgs mdz and 93 bbls and casks liquors	1,236 20	606 80
121 casks and pipes and 881 pkgs wine	8,012 00	5,564 02
50 pkgs mdz	7,987 00	2,328 75
635 pieces burr stone	395 00	39 50
2 cases leather	348 00	69 60
150 pkgs groceries	708 00	280 00
157 do brandy	6,548 62	6,548 62
24 do sundries	1,624 00	468 15
62 do champaigne and brandy	880 23	569 03
Total from France	28,430 09	16,474 47

FROM ENGLAND

62 casks 933 pkgs hardware	83,023 00	24,359 70
8 pkgs cutlery	3,510 00	1,053 70
453 crates 958 pkgs earthenware	41,568 00	12,957 90
425 bundles sheet iron 503 boxes tin plate 124 crates earthenware	8,641 00	2,021 85
48 casks chains &c	3,835 00	1,050 50
135 pkgs hoop iron	201 00	60 30
29 do saddlery	2,023 00	537 85
111 tons pig iron	1,487 00	446 10
1 cask razors	1,237 00	271 10
1 case shot belts	356 00	106 80
25 cases drugs and medicines	946 00	142 00
50 casks soda ash	1,795 00	179 50
3,233 boxes tin plate &c	26,513 00	3,631 20
2,136 bundles iron &c	2,059 00	607 70
23 cases dry goods	4,476 00	1,001 30
1,524 pkgs copper &c	4,765 00	1,090 05
Total from England	204,435 00	49,507 55
" " Bremen	16,422 75	3,969 65
" " Hamburg and Antwerp	1,506 00	441 60
" " Havana	42,394 00	12,718 20
" " France	28,439 05	16,474 47
Total value and duties for 1849	293,196 80	83,111 47
" " " " 1848	130,844 90	40,964 87
Increase over last year	162,351 90	42,146 60

Gross amount of Receipts of Customs at the Custom House, Port of St. Louis, from September, 1842, *to December* 31*st* 1847:

	Duties on Imports.	*Hospital Moneys.*	*Total.*
1842, Sept., Oct., Nov., Dec.,	00 00	111 76	111 76
1843, during the year	4,084 28	1,470 43	5,553 71
1844, " "	14,635 46	1,545 65	16,181 11
1845, " "	14,255 58	2,056 61	16,312 19
1846, " "	27,320 02	2,455 47	29,776 49
1847, " "	71,464 51	2,374 19	73,838 70
1848, " "	40,964 87	2,627 28	43,532 15
1849, " "	83,111 47	2,469 08	85,580 55

MISCELLANEOUS STATISTICS.

STATISTICS OF THE PUBLIC LANDS.

The following tables have been made up with great care from the report of the Commissioner of the General Land Office. And we take this occasion to say that the report from that department, by Commissioner Young, published during last year, is in our opinion, among the most complete and satisfactory public documents that we have ever examined.

	Areas of the States, Square miles.	Acres.	Surveyed to January 1. 1849.	Unsurveyed up to January 1. 1849.	Offered for sale up to January 1, 1849.
Ohio,	39,964	25,576,960	16,770,984		16,770,984
Indiana,	33,809	21,637,760	21,487,760		21,359,707·45
Illinois,	35,459	25,459,200	35,429,234·59	29,965·45	35,397,921·22
Missouri,	67,380	43,123,200	41,440,556·28	1,682,643·72	39,635,609·30
Alabama,	50,722	32,462,080	31,993,813·46	33,677·05	28,224,757·05
Mississippi,	47,147	30,174,080	30,174,080		30,174,080
Louisiana,	46,431	29,715,840	18,843,212·84	10,872,627·16	17,322,962·94
Michigan,	56,243	35,995,520	27,858,503·06	8,137,016·94	27,455,761·70
Arkansas,	52,198	33,406,720	38,842,661·87	564,068·13	32,258,257·70
Wisconsin,	53,924	34,511,360	14,423,055·13	20,088,304·87	13,427,189·27
Iowa,	50,914	32,584,960	14,571,131·20	18,013,228·80	15,887,298·55
Florida,	59,268	37,931,520	18,540,765·64	19,390,754·35	15,047,425·29
Total in 12 States,	613,405	392,579,200	304,376,348·03	78,812,286·48	289,961,954·47

	Quantity sold up to January 1 1849.	Amount rece'd for lands sold up to Jan. 1 1849.	Average per acre	Common schools, 16 section.	Grants to Universities, Colleges and seminaries
	Acres.	Dollars.	Dollars.	Acres.	Acres.
Ohio,	12,490,215·49	20,607,249·30	1,66	675,094·03	24,320
Indiana,	15,477,628·51	21,316,099·87	1,38	631,863·71	46,080
Illinois,	15,040,145·11	19,554,409·33	1,30	978,448·89	46,080
Missouri,	9,726,360·86	12,721,141·64	1,31	1,108,073·11	46,080
Alabama,	10,882,233·47	16,888,047·38	1,56	897,166·10	46,080
Mississippi,	13,462,221·67	16,402,691·62	1,36	846,747·51	46,080
Louisiana,	3,224,025·80	4,086,394·26	1,27	520,384·80	46,080
Michigan,	9,071,223·28	11,399,519·16	1,26	1,001,170·93	46,080

Arkansas,	2,995,237·15	3,769,694·90	1,26	895,131·97	46,080
Wisconsin,	4,567,094·76	5,792,234·88	1,27	960,984·33	46,080
Iowa,	2,361,022 24	2,954,052·29	1,25	901,831·00	46,080
Florida,	942,248·12	1,217,542·69	1,29	1,005,960·00	92,160
	100,209,656·46	$136,272,079·32	1,35	10,422,856 38	576,000

	Quantity granted for internal improvements.	To individuals and companies.	To seats of government & public buildings.	Military services in our late war.	Military services in the Mexican war.
	Acres.	Acres.	Acres.		Acres.
Ohio,	1,181,135·47	32,141·24		63,842·64*	44,429
Indiana,	1,609,861·61	843·44	2,560	69,776·61	189.540
Illinois,	500,000	954·64	2,560	2,850,880·30	683,700
Missouri,	500,000		2,560	481,773·20	207,200
Alabama.	500,000	1,981·53	1,620	1,760	19,160
Mississippi,	500,000	15,965·31	1,280	3,22·25	16,840
Louisiana,	500,000	8,412·98		160	76,720
Michigan,	500,000	4,080	12,895·72†	4.596·97	29,920
Arkansas,	500,000	139,366·25	8.280	1,078,845·31	62,400
Wisconsin,	858,400	5,705·82	1,600‡	79,858·17	736.080
Iowa,	825,078·22	18,226·86	3,840	19,115·06	462,360
Florida,	500,000	1,743,661·61	1,120§		80
Total,	8,474,475·30	1,971,339·68	38,315·72	4,650,930·51	2,533,429‖

Table showing the quantity of land sold in each year by the General Government, in the twelve States containing government land, from the year 1787 to 1849

Years.	Acres.	Years.	Acres.	Years.	Acres.
1787	76,525·14	1814c	1,079,514·29	1831g	2,804,744·92
1796	42,057·62	1815	1,147,350·53	1832	2,411,852·10
1799	640	1816	1,372,562·45	1833	3,824,655·60
1800	70,947·81	1817	1,158,198·44	1834	4,561,521·47
1801	486,78 i·53	1818d	1,505,611·47	1835	12,230,803
1802	254,770·45	1819	991,297·92	1836	19,113,986·73
1803	167,551·90	1820	503,881·64	1837	5,385,775·84
1804	479,816·02	1821e	822,181·72	1838h	3,119,140·95
1805	434,112·37	1822	763,810·94	1839	4,990,417·55
1806	269,742·46	1823	638,748·84	1840	2,190,834·30
1807a	180,061·43	1824	723,038·42	1841	1,115,096·28
1808	184,629·52	1825f	871,619·19	1842	1,133,068·44
1809b	247,507·30	1826	839,262·80	1843	1,651,699·37
1810	249,215·87	1827	905,937·39	1844	4,721,006·43
1811	515,643·69	1828	946,650·68	1845	1,802,428·95
1812	318,339·59	1829	1,236,444·65	1846	2,186,310·63
1813	483,257·16	1830	1,880,619·23	1847	2,498,157·34
				1848	1,887,553

*1,301,326·32 acres of land were located in Ohio under claims growing out of the revolutionary war. †This item includes 10.000 acres selected in the Detroit district for public buildings at Detroit—leaving of the grant 3,200 acres to Michigan for seat of government. ‡Of the grant of 6,400 acres to Wisconsin for seat of government 4,800 are yet unselected. §Of the grant of 6,200 acres to Florida, for seat of government and public buildings, 5,120 acres remain unselected.

‖According to the report of the Commissioner of the General Land Office 2,496,560 acres were located by land warrants in the first three quarters of 1849.

aAll the land sold anterior to this date were situate in Ohio. The first public

sales in Indiana and Mississippi were in 1807.

bThe first public sales in Alabama were in 1809.

cThe first sales in Illinois were in 1814.

dThe first sales in Missouri; Louisiana and Michigan were in 1818.

eThe first sales in Arkansas were in 1821.

fThe first sales in Florida were in 1825.

gThe first sales in Wisconsin were in 1831.

hThe first sales in Iowa were in 1838.

The following Tables show the quantity of lands disposed of for cash, Mexican war warrants, and other purposes in 1848, and the first three quarters of 1849.

Quantity of land disposed of in 1848.

Sales for cash,	1,887,533	acres.
Mexican war warrants,	2,288,960	"
States selections, act of 1841,	378,058	"
Improvement of rivers, &c,	321,188	"
Choctaw certificates,	57,249	"
Total,	4,933,009	acres.

Quantity of land disposed of in the first three quarters in 1849.

Sales for cash,	887,206	acres.
Located by land warrants,	2,496,560	"
Total,	3,383,766	acres.

	Saline reservations selected.	Private claims confirmed.	Indian reservations.	Area of swamp lands reported by Surveyor General.	Total offered and unsold and unappropriated Jan. 1 1849.
	Acres.	Acres.	Acres.	Acres.	Acres.
Ohio,	24,216·86	26,459·80†	16,330·73	303,329	807,556·15
Indiana,	24,235·58	179,880·53	126,220·71	981,682	3,271,730·59
Illinois,	120,907·66	188,901·61	48,989·69	1,833,412·94	14,998,937·55
Missouri,	45,625·60	1,362,455·10‡	22,587·61	1,517,287	29,437,942·34
Alabama,	13,040*	213,386·65	2,542,378·82	436,450	17,450,560·03
Mississippi,		688,082·25	277,612·04	2,239,987	14,326,430·95
Louisiana,		2,092,903·91		2,266,075	23,462,018·86
Michigan,	40,522 65	126,711·25	109,300·83	4,544,189	25,057,704·32
Arkansas,	45,032·60	118,451·12		4,907,673	27,464,603·49
Wisconsin	43,080*	36,880·99	137,894·27	1,259·269	27,431,029·76
Iowa,	43,080		119,133 34	33,813	28,368,436·89
Florida,		188,386·77	227·49	562,170	33,837,392·79
Total,	401,661·04	5,222,500·98	3,400,725.53	20,785,336·94	245,913,343·79

*These lands remain unselected.

†8,805,976 acres were reserved in Ohio for companies, individuals and corporations.

‡181,115,43 acres, New Madrid and new locations in Missouri.

COMPARATIVE COST OF WIRE AND PLANK FENCES.

THE folllowing statement of the comparative cost of wire and plank fences has been furnished by a highly intelligent and practical farmer of St. Charles county, Missouri, whose estimates, as we understand, are based upon the cost incurred by himself in both modes of fencing.

EDITORS.

Comparative Expense, at and near St. Charles, of strong rough plank, and strong rough wire fencing—both proof against cattle, horses, hogs, pigs, and sheep:

A plank fence round a forty acre lot, five feet high—440 yards to a side—a mile in all—posts six feet apart, poles at the bottom, on the ground, a twelve inch plank for base, four six inch planks, on the sides, capped with a six inch plank, and six inch battens on each poost—not painted.

880 cedar posts at 25 cents		$220 00
440 bottom or ground poles 4 cts		17 60
440 bottom plank	5280 feet	
1760 side plank	10560 do	
445 plank for caps	2640 do	
880 battens	2200 do	
Nett plank in the fence	20680 do	
Say at 1 1-2 cts. per foot, is		310 20
450 lbs nails, 60 to the pound, at 5 1-2 cts		24 75
Cost of materials		$572 55
Seting the 880 posts and placing the 440 poles properly, say		$12 00
Carpenter's work, say 6 cts per pannel of 12 ft		26 40
Extras say		9 05
(Say ab't $1 40 per pan'l of 12 ft)		620 00

A wire fence round the same lot, five feet high, nine strands of No. 9 wire—the posts to be twelve feet apart, with a stout pole fitted at the bottom between the posts, the wires painted three coats, white lead.

440 cedar posts at 25 cts	110 00
8289lbs No. 9 wire at 8 cts: St. Louis	231 12
440 ground poles or rails at 4 cts	17 60
Annealing the wire say I-2c per lb. say	15 00
Paint, oil and brushes say	2 75
Boring and setting 440 posts	8 00
Staples (of wire 50 to the lb)	1 75
Stretching and painting the wires	15 00
Fitting down the ground poles	4 00
Extras, say	14 78
The whole cost at most	$420 00

Near nbout 96 cts per pannel of 12 feet.

A strand of No. 9 wire 1800 feet long will weigh just 100 pounds, and cost $8 00.

A strand 1760 pards, or a mile long, (sufficient to enclose just 40 acres in a square,) will weigh 321 pounds, and cost at St. Louis $25 68-100.

So nine strands will weigh 2889 pounds, and cost $231 12-100.

A string of 6 inch plank a mile long will contain 2640 feet.

A string of 12 inch plank, same length, will contain 5280 feet.

The foregoing estimates are not PRECISELY correct, of course; but will be found probably to approximate very nearly to the truth—near enough, at any rate, to show on which side economy and utility may be found.

NOTE.—If the plank can be had on the ground at $1 25c per hundred, it will reduce the cost to $567 30-100, or about 128 cts. a pannel. If 8 strands of wire will be sufficient, then the wire fence will not cost over ninety cents per pannel.

We take this occasion to reply to an inquiry, made by one of our patrons, in respect to the size of wire to be preferred for fencing. The only information that we have met with on this point, is contained in the CULTIVATOR, for the present month. It is there stated, on the authority of Mr. Ellet, the builder of wire bridges, that No. 10 wire will sustain a weight of 1500 pounds; and the writer supposes that an animal must exert a force of about 4500 pounds to break a fence of No. 10 wire, as it would meet with the resistance of three strands. Though this might not always be the case, yet we should conclude that a fence made of wire, each strand of which was capable of sustaining a force equal to 1500 pounds, would be sufficient to turn any kind of stock. Experience, however, is the best guide in such matters, and we should be pleased if some one who has made the experiment of constructing wire fences, would give us their opinion upon this point.—EDITORS.

From the Washington Union.

THIRTY-FIRST CONGRESS.

As a matter of convenient reference, as well as for general information, we give below the names of the Senators and members of the House of Representatives, constituting the Thirty-first Congress, with their respective party designations. For the alphabetical list of the members of the House of Representatives, we are indebted to our worthy friend, Major B. B. French, of this city, for whose accuracy in these matters the public have an ample guarranty in the fact that he has for many years been connected with the House in the capacity of principal clerk.

SENATE.

	Term expires.		Term expires.
Alabama.		*Michigan.*	
Benj. Fitzpatrick,	1853	Lewis Cass,	1851
William R. King,	1855	Alpheus Felch,	1853
Arkansas.		*Missouri.*	
Wm. K. Sebastian,	1853	Thomas H. Benton,	1851
Solon Borland,	1855	D. R. Atchinson,	1855
Connecticut.		*New Hampshire.*	
*Roger S. Baldwin,	1851	†J. P. Hale,	1853
*Truman Smith,	1855	Moses Norris, jr.,	1855
Delaware.		*New York.*	
*John Wales,	1851	D. S. Dickinson,	1851
*Presly Spruance,	1853	Wm. H. Seward,	1855

	Term expires.		Term expires.
Florida.		*New Jersey.*	
David L. Yulee,	1851	*Wm. L. Dayton,	1851
*Jackson Morton,	1855	*Jacob W. Miller,	1853
Georgia.		*North Carolina.*	
*John M. Berrien,	1853	*W. P. Mangum,	1853
*Wm. C. Dawson,	1853	*George E. Badger,	1855
Indiana.		*Ohio.*	
Jesse D. Bright,	1851	*Thomas Corwin,	1851
James Whitcomb,	1855	†S. P. Chase,	1855
Illinois.		*Pennsylvania.*	
S. A. Douglas,	1853	Daniel Sturgeon,	1851
James Shields,	1855	*James Cooper,	1855
Iowa.		*Rhode Island.*	
Geo. W. Jones,	1853	*Albert C. Greene,	1851
A. C. Dodge,	1855	*John H. Clarke,	1853
Kentucky.		*South Carolina.*	
*J. R. Underwood,	1853	John C. Calhoun,	1853
*Henry Clay,	1855	A. P. Butler,	1855
Louisiana.		*Tennessee.*	
S. U. Downs,	1853	H. L. Turney,	1851
Pierre Soule,	1855	*John Bell,	1853
Maine.		*Texas.*	
Hanibal Hamlin,	1851	T. J. Rusk,	1851
J. W. Bradbury,	1853	Sam. Houston,	1853
Massachusetts.		*Vermont.*	
*Daniel Webster,	1851	*S. S. Phelps,	1851
*John Davis,	1853	*William Upham,	1853
Maryland.		*Virginia.*	
Benj. C. Howard,	1851	J. M. Mason,	1851
*James A. Pearce,	1855	R. M. T. Hunter,	1853
Mississippi.		*Wisconsin.*	
Jefferson Davis,	1851	Henry Dodge,	1851
Henry S. Foote,	1863	Isaac P. Walker,	1855

Total 60.—Democrats 34—Whigs 24—Free soil 2.

HOUSE.

Alphabetical List of Members of the House of Representatives of the United States.

Whigs marked thus * Free soil whigs marked ‡ Free soil democrats marked †

N Albertson, Ia
*H P Alexander, N Y
‡C Allen, Mass
*A J Alston, Ala
*J M Anderson, Tenn
*G R Andrews, N Y
Wm S Ashe, N C
*G Ashmun, Mass
T H Averett, Va
T H Bayly, Va
‡G W Julian, Ia
D S Kauffman, Texas
*John B Kerr, Md
*D P King, Mass
*G G King, R I
*J A King, N Y
†P King, N Y
*J G King, N J
*T B King, Ga
Emile La Serre, La

*E D Baker, Ill
W V N Bay, Mo
J M H Beale, Va
Wm H Bissell, Ill
K S Bingham, Mich
T S Bocock, Va
*D A Bocker, N Y
W Booth, Ct
*R J Bowie, Md
L Boyd, Ky
F W Bowdon, Ala
J B Bowlin, Mo
*D Breck, Ky
*G Briggs, N Y
A G Brown, Miss
W J Brown, Ia
*J Brooks, N Y
A W Buel, Mich
A Burt, S C
*H Burnett, N Y
*L Burrows, N Y
*C Butler, Pa
*T B Butler, Ct
*E C Cabell, Fa
G A Caldwell, Ky
*J P Caldwell, N C
‡L Campbell, O
J Cable, O
D K Carter, O
*J Casey, Pa
*S Calvin, Pa
*J R Chandler, Pa
C F Cleveland, Ct
*C E Clark, N Y
*T. L. Clingman, N. C.
H. Cobb, Ga.
W. R. W. Cobb, Ala.
*H. S. Conger, N. Y.
W. F. Colcock, S. C.
*C. M. Conrad, La.
*M. B. Corwin, O.
*O. Cole. Wis.
J. Corwell, F. S. W., O.,
J. R. J. Daniel, N. C.
*E. Deberry, N. C.
M. M. Dimmick, Pa.
*J. C. Dickey, Pa.
D. T. Disney, O.
*J. F. Dixon, R.I.
J. D. Doty, Wis.
*W. Duter, N. Y.
*J. H. Duncan Mass.
S Leffler, Iowa
*L C Levin, N A Pa
N S Littlefield, Me.
J A McClerand, Ill
J McDowell, Va
J E McDonald, Ia
*E W McGoughey, Ia
*T McKessock, N Y
J X McLanahan, Pa
R M McLane, Md
*F E McLean, Ky
F M'Mullin, Va
J McQueen, S C
W McWillie, Miss
*H Mann, Mass
J Mann, Pa
*H Marshall, Ky
J C Mason, Ky
*O B Mattison, N Y
*J S Meacham, Vt
R K Meade, Va
J K Miller, O
J S Milson, Va
*H D Moore, Pa
*C S Morehead, Ky
J D Morris, O
I E Morse, La
*J Morton, Va
*W Nelson, N Y
*H Nee, Pa
*W A Newell, N J
*A J Ogle, Pa
E B Olds, O
J J Orr, S C
*J. Otis, Me.
*D. Outlaw, N. C.
*A. F. Owen, Ga.
R. Parker, Va.
C. H. Peaslee, N. H.
L. B. Peck, Vt.
J. S. Phelps, Mo.
*J. P. Phœnix, N. Y.
E. D. Potter, O.
P. Powel, Va.
*H Putnam, N. Y.
*C. W. Pitman, Pa.
*D. Runsey, N. Y.
*R. R. Reed, Pa.
*G. O. Reynolds, N. Y.
Wm. A. Richardson, Ill.
*Elijah Risley, N. Y.
J. Robbins, Jr., Pa.

C. L. Dunham, Ia.
C. Durkee, F. S. D. Wis.
H. A. Edmundson, Va.
*A. Evans, Md.
*Nathan Evans, O.
Andrew Ewing, Te.
W. S. Featherston, Miss.
Graham N. Fitch, Ia.
*Orrin Fowler, Mass.
*John Freedley, Pa.
Thos. J. D. Fuller, Me.
*M. P. Gentry, Te.
Elbridge Gerry, Me.
Alfred Gilmore, Pa.
‡J. Giddings, O.
*Rufus K. Goodenow, Me.
*Daniel Gott, N. Y.
*H. D. Gould, N. Y.
Willis A. Gorman, Ia.
Jas. S. Green, Mo.
*Joseph Grinnell, Mass.
*Ransom Halloway, N. Y.
*Moses Hampton, Pa.
Edward Hammond, Md.
Wm. T Hamilton, Md.
H. A. Haralson, Ga.
T. C. Hackett, Ga.
J. A Harmanson, La.
S. W. Harris, Ala.
Isham G. Harris, Te.
T. L. Harris, Ill.
Andrew J. Harlan, Ia.
Willard P. Hall, Mo.
*Andrew R. Hay, N. J.
*T. S Haymond, Va.
*Wm. Hebbard, Vt.
*Wm. Henry, Vt.
Harry Hibbard, N. H.
*H. W. Hilliard, Ala.
Moses Hoagland, O.
Isaac E. Holmes, S. C.
*J. W. Houston, Del.
A. R. Holliday, Va.
‡J. Howe, Pa.
V. E. Howard, Texas.
David Hubbard, Ala.
‡W. Hunter, O.
Samuel W. Inge, Ala.
*W. T. Jackson, N. Y.
*James L. Johnson, Ky.
Andrew Johnson, Te.
R. W. Johnson, Ark.
George W. Jones, Te.
J. L. Robinson, Ia.
‡J. M. Root, O.
*R. L. Rose, N. Y.
T. Ross, Pa.
*Julius Rockwell, Mass.
*W. A. Sackett, N. Y.
John H. Savage, Te.
Cullen Sawtelle, Me.
*Robert C. Shenck, O.
*A. Schermerhorn, N. Y.
*J. L. Schoolcraft, N. Y.
James A. Seddon, Va.
*E. G. Spalding, N. Y.
*W. Sprague, Mich.
F. P Stanton, Te.
*R. H. Stanton, Ky.
*A. H. Shepherd, N. C.
*Edward Stanly, N. C.
*A. H. Stephens, Ga.
*Thaddeus Stepheos, Pa.
Charles Stetson, Me.
William Strong Pa.
*P. H. Silvester, N. Y.
Charles Sweetzer, O.
*John L. Taylor, O.
James H. Thomas, Te.
James Thompson, Pa.
Jacob Thompson, Miss.
*John B. Thompson, Ky.
W. Thompson, Iowa.
*J. S. Thurman, N. Y.
*Robert Toombs, Ga.
†A. Tuck, N. H.
*W. Underhill, N. Y.
*J. Van Dyke, N. J.
A. W. Venable, N. C.
*Samuel F. Vinton, O.
Hiram Walden N. Y.
Loren P. Waldo, Ct.
Daniel Wallace, S. C.
*A. G. Watkins, Te.
M. J. Welborn, Ga.
J. Wentworth, Ill.
*Hugh White, N. Y.
W. A. Whittlesey, O.
Isaac Wildrick, N. J.
*C. H. Williams, Te.
†David Wilmot, Pa.
*James Wilson, N. H.
*Robert C. Winthrop, Mass.
Amos E. Wood, O.
J. A. Woodward, S. C.
T. R. Young Ill.

MENTAL CULTURE AND BUSINESS LIFE.

The great secret of happiness in the life of the business man consists in associating with his pursuits a habit of improving his mental and moral faculties; that, while his labors secure the appliances of physical sustenance and comfort, he may grow rich in knowledge, and enjoy the sympathies of his fellow men.

How often do we meet with those, who, by a life of energy, perseverence, and toil, have amassed a splendid fortune—that goal, perhaps, of their earliest ambition—yet, who are rendered incapable of enjoying it—a curse to themselves and society; because the highest and holiest faculties of their minds have been crushed and stultified by wanton self-neglect in earlier life! Doubtless in their youthful aspirations, whilst first entering upon their career, they dreamed that, when crowned with success, and surrounded with wealth, affluence, and influence—when a luxurious and splendid home should own them as masters, they would then cultivate a taste for the arts, sciences, literature, and moral excellence, and thus prepare themselves, to associate with the intelligent, moral and refined of society. But alas! when too late, they have awoke to the astounding discovery that the fountains of the human soul, whence issue those streams of human pleasure and happiness, have become an *arid* desert from long neglect—and that for them there are no moral dews, descending from Heaven, to moisten the heart, or refresh the mind.

He who would not prove recreant to his nature, must comprehend and observe the three great cardinal features of humanity, neither of which can be neglected or violated without a curse resting upon him who is thus guilty. We mean the *physical*, *mental*, *and*, *moral*—that mysterious *triune* nature in man, which constitutes him lord of the *earth*, and when properly blended and cultivated, makes him but a little lower than the *angels*.

But if his physical nature alone be nurtured and cultivated at the expense of both the mental and moral, he becomes a *mere animal*, groveling and brutish in his appetites and propensites; and, if the mental and physical natures are only cultivated and developed, to the exclusion of the moral, the man becomes an animal, with an intellect, sharpened and acute, ready and capable, at all times, of executing the suggestions of his animal instincts, desires, and appetites; and where his moral nature has been utterly depraved by this neglect, he becomes a fiend in human shape—prostituting the fairest flowers of human loveliness and virtue to his base *selfishness* and *brutal lusts*—violating and polluting the sanctity of the fireside hearth—carrying wo, desolation, and death to the very bosom of society—a living *mockery* of his *species*. And, on the other hand, where the moral nature alone, has been cultivated, nurtured, and developed, to the neglect of the physical and mental natures, the man becomes a hardened unfeeling, and unreasoning bigot—devoid of all sympathy with his kind. Guided by a fatal fanaticism, he becomes in time the *man of one idea*,

and finally ends a *monomaniac*, and thus passes from "*life's fitful dream*" to a *mad house*—one of those *mournful living* tombs, commemorative of the *wreck* of human reason. This is no fancy sketch; but a sad truth, apparent to the common observation of all, when only a part of the faculties given us by the Great Author of our being, have been nurtured and developed, and the others neglected. But there are many and other instances constantly occurring where a neglect to properly, and mutually blend physical, mental and moral culture —has been the cause of keeping in ignorance and obscurity, some of nature's noblest and brightest *minds*. Indeed, these three great constituents of the mind are mutually dependent one upon the other; and no individual can arrive at legitimate manhood without their joint culture. It matters not what occupation he may follow, he cannot be truly great, and excel even in that, without the equal development of this *triune* principle of his nature.

Of all classes of men, he who is engaged in industrial pursuits, were he true to himself, is in the best condition to develop these three great constituents of his mind.

Obliged to associate physical exercise with that daily avocation, which yields the means of sustenance and comfort to himself and family, it is only necessary that he should allot a portion of time, from each day or week, to books, thought, science and literature, and he will find that his mental and moral powers, will assimilate in tone, harmony and power, to his physical development. Thrown, too, in daily contact with his fellow-men upon the footing of equality, arising from citizenship and similarity in occupation and pursuits, his sympathies naturally comprehend within their grasp the struggling, toiling millions around him, who, like himself, are struggling for the means to supply the common wants of life, and such a position in society as will be most conducive to their happiness. It is this alone that constitutes the true link of sympathy which binds man to man in *unity* and *brotherhood*, and enables him to comprehend practically that great and beautiful truth, in the the christian philosophy, of "*doing unto others as you would that they should do unto you, and loving your neighbor as yourself.*" And let no man suppose that the time thus devoted to mental and moral culture, would be detrimental to him in a business point of view. On the contrary, it cannot fail to be of infinite advantage. It would impart to his mind that tone of vigor, firmness, and confidence, blended with sympathy and kindness, which the ignorant can never know, nor feel. His mental vision as a business man would be enlarged—each avenue of industrial pursuit would open to his view, and in this favored country, such a mind could never know nor feel dispair. The true objects, and ends of life, would ever be present to his waking senses—and should fortune bless and prosper his efforts, to the accumulation of wealth, he would know how to use it, not only for his own good, but for that of others also. To such a man, wealth would not prove a *mockery*, *burthen* and a *curse*, but a source of pleasure and happiness in the consciousness, that he possessed the means of imparting good unto others. To him old age would bring no terrors, fears, or remorse,—no weeping widows or orphans would rise from their *graves*, to accuse him of grinding, wrong, or cold and callous hearted neglect. Having kept pure and intact a green spot in his

heart from youth to old age, amid all the tumult, toil and distraction of his business life, by proper mental and moral culture; his heart was ever kept open to the voice of sympathy and kindness, and he would rather have submitted to a *wrong* than to have *inflicted* it; and now in his decline, surrounded by wealth and comfort, that green spot in his *world-tried heart* blooms with renewed freshness,—a capital, yielding him interest more precious than all his wealth besides.

But he who would attain to this enviable position must learn to school his mind to habits of thought and calm reflection, from the commencement to the end of his career of active life; so that when middle age arrives it shall find him with fixed and established habits. For it has been truly said that habit is second nature, and when we have broken a good habit we find it most difficult to re-establish it, and more difficult still is it to break a bad habit when once thoroughly established. Youthful habits are stronger than those formed in middle age, and those formed in middle age still stronger than those formed in old age; indeed, it is hardly possible to form a permanent habit in the decline of life, as the youth and middle aged man is so must the old man continue to be, for good or for evil to the *grave*. Hence, the imperious necessity of our forming those habits in early life which are the best calculated to develop all of the powers and faculties of the mind and the finest feelings of the heart. For upon these depend our future world of happiness or woe—of sunshine or gloom.

It is not sufficient that we resolve in our own mind, that at some future day, more propitious than the present, when time and circumstances will favor, we will cultivate a habit of study, and a taste, and a desire for the acquisition of knowledge. We must commence immediately if we would cultivate and fix the habit so as to remain with us in after life. "Now is the accepted time;" procrastination is moral death. That man who waits supinely, with a vague hope that at some future time circumstances will permit him to do what God and his own nature requires of him now, will find that those circumstances will never occur, and will live to regret—deeply regret, that he did not, even in the very *vortex* of business, while yet young, commence the habit of self-culture and improvement.

Indeed, much of the most valuable practical wisdom of life is derived from contact with our fellow men in the great thoroughfares of business. Where mind grapples with mind, and heart responds to heart, in defiance, hate, fear, friendship—here character is developed in every variety of shade and coloring; here each and all are struggling for the attainment of their own individual idea; here we meet young and ardent hope, vaulting ambition, undying energy and perseverence, low cunning, pride, success, generosity, poverty and despair, mingled in the same *groupe*, all of which leave their impress on each mind for good or for evil, according to its culture and capacity to receive them. To him who has cultivated a habit of thought and of reasoning, and an appreciation of moral beauty, harmony, and excellence, the lesson is fraught with wisdom, goodness, and improvement; but to him who has trampled upon the gifts that God gave him, and who has desecrated that sacred boon to man—*the human mind*—there is no true

wisdom imparted—no goodness left behind—darkness and confusion still *reign* there *supreme.*

But, although much may be learned by contact and observation, it is not all that is required. There must be some little time set apart for calm reflection upon what has been seen. Conclusions must be drawn; and in this effort, the mind needs the aid of other minds, who have accurately treated of each particular subject or branch of knowledge upon which information is sought. Hence, books must be resorted to, and the proper selection of these books, is the great *desideratum.* It is not so much the quantity, as the quality we should regard. A few books well selected, and well read, are better than many books badly selected, and badly read.

For, in order to attain the full development of manhood, the mind must have proper food and nourishment as well as the body. He who would preserve his physical body in good health and full vigor, must minister to it substantial and healthful food at stated times and in proper quantities. So with the mind—if we would develop all of its mighty powers, and varied resources, we must give unto it such mental food as will enrich and invigorate the life-blood of thought. As the human stomach is to the physical system, so is the BRAIN to the mind. The one digests the food that constitutes the blood that is to impart health, vigor and life to the body; the other, that mental food which is to be converted into the spiritual blood of immortal life, either to elevate and glorify that life, or to darken and curse it.

We suppose, too, that the mind, like the body, requires a variety of food to maintain its healthful condition. This variety, however, should be selected with a view to the substantial and lasting benefits to result therefrom, such works should be read that when the mind has digested their contents, a good stock of ideas should be found remaining to enrich the great storehouse of memory, to be called up as a strength and support when the vigor of manhood has departed, to refresh and vivify the *winter of life.*

But, there are a class of works prevalent—and we very much fear they are read by many of our business young men, more, perhaps, than any other kind. We allude to the popular novels of the day. These productions are teeming from the press, and constantly crowding our *literary marts.* From thence they are thrown over the length and breadth of our land, finding their way into the hands of all classes of society—all sexes, ages, and conditions, and constituting the principal reading of the youth of our country. What the result of this will be, for weal or wo, the future alone can determine. We fear, however, it will not add to the sum of human happiness.

We are not prepared to say that *novels* and romances may not be well enough as a *recreation* to minds engaged in constant and *severe* mental labor. But as constituting the principal reading of an individual, they are pernicious—tending to destroy the memory, and weaken and enervate all of the nobler and higher powers of the mind. It is not surprising, however, that they should be so attractive to the young, as they pander to the passions, and stimulate their imaginations—follies which they can only be made sensible of by sad and bitter experience. But there will come a time, too soon in the lives of all, as age advances, when the novel must be thrown aside; and the misfortune is, that,

whilst it has left no substantial food behind for the mind of age to live upon, it has unfitted it for the acquisition of that knowledge which age so much requires, so that, like the shipwrecked mariner, drifting upon a shoreless and stormy sea, without chart, compass, or rudder, he finds that what should have been the mental accumulations of his youth, constituting a rich fund of thought, in the great storehouse of the mind, have in his old age turned to *dust* and to *ashes*. Such must ever be the fate of the habitual novel reader, when youth and passion have departed.

In urging the benefit and necessity of mental culture upon the young men of the Mississippi valley, we would not be understood as uttering any thing against those close business habits, or that activity, vigilance, energy and industry so essential to success in life: this is commendable. But, what we would suggest is, that business, and mental, and moral, culture are not at all incompatible. But, on the contrary, we believe, the man who is engaged in active every day employment is thoroughly competent, if he will make proper application of his time, to make sufficient improvement for his own future happiness, and to discharge all the duties devolving upon him as a citizen and member of society. His daily contact with the business world places in his hands the touch stone of truth, by which to test that which he derives from books, the one kind of knowledge ballances the other and gives to him an equilibrium of mind and firmness of character that the mere *student of books* can never know.

We assure our young friends we wish them all success in business, and hope they may accumulate fortunes. But let us beg of them to seriously reflect whether it would not be a good *investment*, one that would pay good interest to them in future time; to devote a few hours out of every week, from the *rush*, *wear* and *tear*, of business, to calm research and quiet thought, whether in the day of their need when the fervent imagination, and ardent passions of youth have grown cold with advancing years, and lost their charm over the heart, and ceased to cheat, bewilder and betray,—when the mind thus stripped of the garb of deception turns from the past to the future, would it not be well, we say, that it should have been strengthened and fortified for this change in life by lessons of wisdom drawn from that fountain of all truth: the christian philosophy?

To the young men of the Mississippi valley these remarks are particularly addressed. They occupy a proud and responsible position, morally, socially, and politically. In their hands is vested a mighty power, a high and a holy trust as *Guardians of the Federal Union* of these States, and it is their solemn duty to prepare themselves for a religious discharge of the sacred obligations resting upon them.

For the time is not far distant when the centre of population will be near the great heart of the Mississippi valley—with population comes political power, the arts, sciences and literature. Here American mind and genius must first take on their true tone, character and *nationality*; here their first great efforts will be made in forming an *American National* literature,—a literature destined to remould the world of thought, directing it to new and hitherto untried channels; here the American thought must be matured, finding vent in uttered word and written record; bearing impress of the magnitude in

extent, resources, powers and glory of the surrounding country; here American character will take on its true tone, dignity and national greatness; here American institutions will receive the impress of their final destiny. Upon the young men of the west devolves the high responsibility of shaping and directing these mighty interests for good or for evil: will they rise commensurate in knowledge, power, thought and deed to the mighty task imposed upon them by their destiny?

Since the first formation of the Federal Union, there has gradually arisen a feeling antagonistic in its character, between the north and the south, calculated, in its tendency, to engender sectional and partisan feeling between the people occupying these two sections of our country. It is the privilege and province of the great west, if she is true to her own destiny, to throw oil upon the angry waves of discord agitating these two sections, and soothe them into harmony and peace—to frown down with indignant scorn and loathing, the first *dawning of an attempt to weaken the bonds of the American Union.*

LITERARY NOTICES AND ACKNOWLEDGMENTS.

THE ST. LOUIS PROBE.

This is the title of a Medical Journal recently established in this city, edited by Drs. Coons and Atkinson. The articles contained in the January number (the only one which has come to hand) appear to have been selected with judgment; and the leading article, "Remarks on Cholera," by the senior Editor, will be found interesting to the general reader as well as to the physician. We take this occasion to remark that, in our opinion, the community in general do not sufficiently appreciate the value of medical journals. The circulation of these periodicals should not be confined to the profession—it would be good economy for every family to take one. The St. Louis Probe is published at two dollars per annum. The enterprising Editors have our best wishes for their success.

DESCRIPTION OF A RAILROAD ROUTE FROM ST. LOUIS TO SAN FRANCISCO, in letters to P. P. F. Degrand from W. L. Dearborn, Civil Engineer. This pamphlet contains more valuable facts relating to the great central route than any other document, of equal size, we have met with. We tender our thanks to Mr. Degrand for his kind attention.

MAURY'S SAILING DIRECTIONS.

We acknowledge our obligations to Lieut. Maury for a copy of this valuable document. Such information as it contains is always highly prized by us.

INTERNAL IMPROVEMENTS IN KENTUCKY.

We have received the annual report of O. G. Cates Esq., President of the Board of internal improvements, for the year 1849. It is an interesting document and highly creditable to the author. A portion of its contents will appear in our next number.

PROCEEDINGS OF THE NORTH AMERICAN POMOLOGICAL CONVENTION HELD AT SYRACUSE SEPT. 1849.

This report fills about 60 pages and contains much interesting and valuable information. We are happy to observe that there is a growing interest felt in Horticultural pursuits, throughout the whole Union. This is owing mainly to the efforts of a few public spirited individuals, who have been instrumental in forming associations and getting up conventions. Such individuals should be regarded as benefactors of the country.

We have also to acknowledge the receipt of the report of the Ohio Nurserymen and Fruit Growers Convention held at Columbus Ohio, December 5th 1849. This is likewise an interesting and valuable document.

TO SUBSCRIBERS.

The March number will complete the 3d volume, and we respectfully request those who desire to discontinue taking the work to send in their names before the commencement of the 4th volume. Otherwise we shall continue to send the work, and charge them as subscribers for the ensuing year. Editors.

THE

WESTERN JOURNAL.

VOL. III. MARCH, 1850. NO. VI.

ART. I.—SHIP CANAL ACROSS THE ISTHMUS, AND PACIFIC RAILWAY.

So much has been said, of late, in respect to Eastern commerce, and of the means of securing a monopoly of the Asiatic trade that we shall neither enter into its history nor undertake to estimate its value in the present article. The attention of the American people, and, indeed, of other nations, is sufficiently awakened to the opening of a shorter route to China, from Europe and the eastern coast of America, to warrant the conclusion that the consummation of this important enterprise, so long contemplated, is near at hand. No one conversant with the resources of this country can doubt that it possesses ample means to effect such an object, and few, we believe, question the policy of appropriating these means to its attainment.

And, were it not for the difficulty of concentrating public opinion upon some certain plan, a canal across the Isthmus, and a central railway across the continent would be commenced as soon as the respective routes could be conveniently located. These routes are both necessary to carry out the great commercial and social idea of the age; for, notwithstanding they may be regarded as links of the same chain, yet, neither can perform the office of the other without inducing incalculable inconvenience to a large portion of the country. In fact, the opening of one of these avenues would increase the demand for the other. Were a ship canal opened across the Isthmus, and no railway constructed through the interior, it would give commercial advantages to the States bordering on the Atlantic and Gulf of Mexico that would be unequal, and, consequently, detrimental to the relative prosperity of the more northern States of the Mississippi valley. Again, should a railway be constructed and no canal opened, this would afford more immediate advantages to the interior than to the maritime States. And, although these advantages would benefit the latter by increasing the facilities of their internal commerce, yet, it would be unjust to leave them without the means of a more direct and cheap communication with the western coast of this continent, and with Asia. Happily, however, for the country and the cause of

civilization, these two works may be accomplished without interfering in the slightest degree with each other; and hence every attempt to connect them, so as to make them dependent projects, to depreciate the value, or, enhance the merits of either beyond their true importance, is calculated to injure the cause of both. Entertaining these views, we deprecate the effects which are likely to be produced by the publication of the address of Lieut. Maury, to the members of the Memphis Convention, which appeared in the Louisville Journal in December last. Like every thing from his pen, this address bears the impress of genius; nor, is there the slightest cause to doubt his enthusiasm in favor of both routes. Yet, we fear that, owing to his especial advocacy of a ship canal, and, of the Gila route for the railway, he has weakened, though undesignedly, in the opinion of many, the claims of a railway from the Mississippi to the Pacific ocean.

His arguments in favor of the railway are based, mainly, upon its importance as a means of national defence: the weakest of all arguments that could be addressed to the American people. Apprehensions of invasion by foreign nations is, perhaps, a subject that less than all others disturb their minds. And, unless it can be shown that their individual interest and the general prosperity of the country will be promoted by the enterprise there is little prospect that they can be brought to act upon the subject. It is true that he anticipates a large commeercial business for the road; but, at the same time enters into estimates to prove that none of the leading staples of the west will bear transportation over it to a market. Upon this head he says:

"All articles which exceed a certain value, according to bulk, will go over this railroad, and the list of them is large.

"But there is a large class of articles which are not valuable enough, according to the bulk, to pay freight over this railroad, and which, therefore, can never pass from one end to the other of it.

"The ability of a railroad to carry on a thorough commerce is inversely as to its length. The longer the road, the greater the aggregate amount of tolls from end to end, and the fewer the articles that can afford to pay those tolls.

"Iron, coal, and plaster, are of all commercial staples the cheapest articles for railway transportation.

"A ton of them occupies the smalest space; they require open cars of the cheapest kind, they are stored not in houses, but out of doors. They require no protection from the weather and are not liable to damage by being thrown off the track, nor by any accident of the road, and therefore the road can afford to take them cheaper than it can flour, beef, pork, sugar, and the like. Taking the mean of the tariff upon these cheap and heavy articles established by fifty odd railways in the United States, I find the average rate of freight over them to be on coal and iron 4 1-2 cents per ton per mile.

"Now, considering that this railroad is to pay no dividends—that Government will allow individuals to run their own engines and cars over it for such tolls as may be sufficient, or, in part, sufficient to keep it in repair, and that flour, sugar, and the staples of the West, can be carried over it for one-third less than coal and iron can be over the private railways—with this supposition, let us see what articles can never go from one end of this road to the other. It is easier to tell

what this railroad cannot do than to tell what it can do, for it will be so powerful for good, and it can do so much. As a general rule, in commerce, it may be assumed that but few articles can well afford to pay more than one-third (33 1-3 per cent.) of their value to get to market.

"The length of this road with detour will probably be none short of 2,000 miles, which at 3 cents the ton per mile will require 60 dollars the ton for merchandise to go from one end of it to the other. This is exclusive of the cost of getting those articles from the place of production to this end of the road, and of the cost of getting them from the other end to market, as to China and the Indies, both of which together may be taken at not less than ten dollars the ton.—Total tolls to market by railway, seventy dollars per ton.

"Now, I will ask the planters and the farmers and the miners of the great valley of the West, if their wheat, their lead, their flour and tobacco, their coal and iron, and hemp and corn, their beef and pork, and cotton and rice, and sugar—if any of these great staples can afford to pay sixty dollars a ton to get a part of the way to market, simply to get from the depot at one end of the road to the depot at the other.

"Ingenuity is great,and invention is ripe in the land. I am, therefore, not prepared to say, that the time will not arrive, when, in consequence of inventions and improvements yet to be made in railways, cars, and the engine, merchandise may be taken at one cent or even at a less rate per ton the mile, over railways. But no such improvements are known at present, and, in estimating the effect of a work like this, the only true guide which we can follow is that afforded us by the lights of experience—consequently, in estimating as to what this road can do, we must take things as they are.

"Tea is worth $2,000 the ton. Tea, therefore, can traverse the road and pay the tolls to the amount of $60 the ton, by paying 3 per cent. only on its value. But corn at fifty cents the bushel must pay some three hundred per cent. on its value to get over this road.

"A ton of silk may be transported over it for perhaps one or two per cent. of its value. But coal which costs $1 50 the ton at the mines, would have to pay forty times its value to get over the road.

"It is aquestion whether any article of less value than $280 per ton (and most all articles of commerce exceed that) could ever seek a market over the road by paying through tolls.

"The subjoined table shows the average or usual value per ton, of our principal agricultural staples in their crude state. The expense of getting a bale of cotton to market in England, after it is pressed on the plantation, including the cost of transporting to railway or steamer, thence to the place of shipment, including wharfage, &c., and thence to England, may be assumed on the average to be $6 the bale, or 20 per cent. of its value, assuming $30 as the price of a bale of cotton. But, instead of 20 per cent. let us suppose that cotton and all our great staples can afford to pay 40 per cent. of their value for the sake of the markets at the other end of the road.

"Even with this extravagant assumption, the figures by the subjoined table show that not one of the great agricultural or mineral staples of the country could afford to go in their crude shape from one end of

the road to the other, with the view of seeking a foreign market in the Pacific:

	Value, per ton.	*Tolls, 40 per cent.*
Corn at 50 cents per bushel is worth - - -	$22 00	$8 80
Wheat at 75 cents per bushel is worth - -	27 75	11 10
Pork and beef at $13 per bbl. - - - - - -	143 00	57 20
Hemp at $80 per ton - - - - - - -	80 00	32 80
Tobacco at 6 cents per lb. - - - - - -	134 40	52 80
Sugar at 6 cents per lb. - - - - - - - -	134 40	52 80
Rice at 4 cents a lb. - - - - - - -	88 00	35 20
Cotton at $30 per bale - - - - - - - -	150 00	60 00

"But they are all required to pay $60 per ton to get over the railroad. They can be placed at the other end of the road by going around Cape Horn, for $25 the ton. Would the saving of time by railway as compared with Cape Horn, compensate for the difference of expense on such articles in ordinary times? I think not. It is obvious, therefore, that not one of these articles at usual prices and at present railway rates can afford to seek a market by this route.

"They are the staples of commerce, the basis of our national wealth. Therefore, there is a link required to make this railroad complete, and that link is a railway immediately, and a ship canal, as soon as one can be built, across the isthmus which joins North and South America together."

We have never supposed that many of our western staples could be transported across this road for the Asiatic trade; but were the freights much higher than Lieutenant Maury's estimates, yet, the western States of the Mississippi valley would supply the mining region of the Sierra Nevada which promises from present appearances, to become the most extensive and profitable market for western produce that can be found upon the Globe. But, with all our respect for the information and fairness of the author, we must say that, in our opinion, his estimates of the cost of transportation are too high. We have not undertaken to ascertain the average cost of freights upon all the roads in the United States.

We know, however, that the rate is high on some of the older roads; again, a great number of the roads are short, and on these the labor of loading and unloading necessarily increases the rate of transportation. We have taken the Western road from Worcester to Albany, as affording, perhaps the fairest data for estimates on the Pacific railway. The Western road is 156 miles in length, with a branch 18.65: in all 174,65 miles, and cost, including stations and machinery, over $50,000 per mile. The rate on this road for sugar, salt, butter, grain, iron, coal, lumber, and groceries is $2,56 per ton, of 2,000 lbs per mile. The income on this road in 1847, was $1,325,336; and the expenses $676,690, about one half of the gross receipts; and yet the company declared a dividend of 8 per cent. Now, here is a road which, with its fixtures and machinery, cost over $50,000 per mile, carrying produce at the rate of $51,20 per ton for 2000 miles and paying 8 per cent on the capital invested.

Any opinion which could be given at this time in regard to the rate of transportation, on the Pacific railway, would be entitled to but

little respect; but it is, however, reasonable, we think, to estimate the rate at not more than $35,00 per ton; provided no dividends are required to be earned on the capital invested in the construction of the work.

But while we are of opinion that the author has estimated the rate of tolls too high on the railway, we are so unfortunate as to think that his estimates by the canal and ocean route are too low. We extract the following paragraphs to show his estimates of charges on this route.

"Seeing how much the dangers of the sea would be lessened by opening this canal, and consequently how much the rate of insurance would be lowered—how much the average rate of sailing under canvass would be increased with the trade winds free, and how much the voyage would be shortened—how small the crew and how trifling the expenses of navigation would be—it is not unreasonable to anticipate that this ship canal would enable us to deliver our cotton, our lead, perhaps our iron, but certainly our rice, wheat, corn, flour, beef and pork, hemp, and tobacco, in the markets of China, India, New Holland, and Japan, at a less rate of freight than we can deliver them in Europe. The lead could go for nothing, as it now does to Europe, for it would serve as ballast.

"The rule which governs the rate of freight in sea voyages under canvas, is the average length of time which it will take a ship to load, perform the voyage, and discharge cargo. If a ship have a cargo on board, it costs no more to sail than to lie at anchor. Her expenses are the same in either case. We see by viewing the matter in this light why the freight is proportionally so much heavier for short voyages by sea than for long. Because in short voyages such a considerable portion of the time is taken up in waiting for freight. A ship that has to make a voyage of 20,000 miles for instance will charge in proportion to the distance much less freight than a ship will which has a voyage of only 2,000 miles. This last may be but 10 days in making the voyage, but it may take her 10 days to load and a week to unload, and a further delay of some days before she can get another cargo. All these are considerations which, in establishing her rates of freight, have to be taken into account by her; whereas, the ship on the long voyage is certain of employment for a longer time, but a small proportion of her time is taken up in loading and unloading and in hunting for a fresh cargo. Therefore, the rates of freight are proportionally less per long than per short voyages.

"A ship going around Cape Horn, with her expensive equipments, heavy crew, dangerous navigation, and large insurance, charges for freight at an average of 12 1-2 cents per ton per day. That is, a ship carrying 1,000 tons of merchandise around Cape Horn to Lima will be 120 days making the voyage, and will charge $15 per ton, which as before stated gives 12 1-2 cents per ton per day.

"Now, then, a ship sailing through this ship canal would make the voyage to China in sixty days, and, for the reasons stated, at much less—say one half—than the cost of the Cape Horn voyage.

"The voyage, being but half the length of the other, should, if the expenses of sailing were the same, be only one-half the Cape Horn freights.

"But the expenses by the canal being so much less, and the wear and tear of ships being scarcely appreciable, let us suppose it will be just one half—this would give from New Orleans and our Atlantic ports $7 50 per ton to China and India, and less to New Holland and all the islands of the Pacific, and, by the same rule, $5 only to Peru and South America. At this rate, the cost of transportation to India and the Pacific markets, from the Gulf and Atlantic ports of the United States, would be for—

Indian Corn, say - - - - - -	10*a*17c per bushel.
Flour, - - - - - - - -	50*a*75c " barrel.
Beef and Pork, - - - - - -	50*a*75c " "
Tobacco, - - - - - - - -	$5*a*$7 50 " "
Rice, - - - - - - - - -	30*a*37c " hundred.
Sugar, - - - - - - - - -	$5*a*$7 50 " hhd.
Cotton, - - - - - - - -	$1*a*$1 50 " bale.

It is thus perceived how this canal would bring Asia and the multitude of markets in the Pacific ocean to be down stream from us. Who can calculate how immense the advantages are of having the favor of both winds and currents in carrying for us to market those cheap and bulky articles which constitute our staples, and which cannot afford to pay so heavily for conveyance as the more light and valuable articles can?"

Surely no individual ought to be better acquainted with this branch of the subject than Lieut. Maury; but we do not comprehend how produce can be transported at as low rates from our sea ports to China, as to Europe. Indeed some of the articles in his list are put down at a much lower rate. He supposes that Cotton can be shipped at from one dollar to one dollar and fifty cents per bale. By reference to tables showing the rates of freight from New Orleans to Liverpool, Havre and New York, on the 1st day of each month for two years, ending in 1848, we find that the prices for cotton to Liverpool during that period, ranged from three-eighths to one penny per pound; which is equal to from about three to eight dollars per bale. The lowest price to Havre during that period was 7-8d. per pound; and it is quoted but twice below 1d.; and in one instance as high as 2d. per pound.

The price to New York, during the same period, ranged from one quarter to one and one-eighth cent per pound; and the average per bale, (supposing it to weigh 450 lbs.) during the period, was $2 56—about double Lieut. Maury's estimates to China. The freight on Tobacco from New Orleans to Liverpool, ranged, during the same period, from 30s. to 57s.; averaging about 41s.—equal to nearly $10 00 per hhd. Lieut. Maury estimates the cost to China at from $5 00 to $7 50 per hhd.

Nor has he been more fortunate, in our opinion, in his arguments in favor of the Gila route for the railway. We make copious extracts from this part of the document, lest we should do injustice to the author. He says:

"There is another point of view in which this work becomes an object of great National concern—California has turned to gold at our touch, and should it continue to supply that precious metal according to the ratio that it has already done, the proportion of gold to silver in

the world will be changed, and, consequently, an alteration in the respective value of the two metals may be expected.

"Gold is sixteen times more valuable than silver, because silver is sixteen times more abundant than gold—in other words the earth has hitherto yielded to the labor of the mines sixteen ounces of silver to one of gold. Should the amount of gold from the California mines change these proportions, so as to give for example, an ounce of gold to ten of silver, gold then will be only ten times more valuable than silver—as we lessen the value of gold, we shall, in the same proportion, lessen the value of California mines and sustain a double loss—a loss with the rest of the world in the depreciation of our gold coin, and which loss will be proportionate to the amount of our gold circulation, and a loss in depreciation in the value of the gold mines in California. To prevent such a calamity, it becomes an object of great National concern to stimulate the working of silver mines and to preserve the relative proportions which now exist as to the quantities of gold and silver. It is obvious that if the mines of California shall continue to furnish yearly fifteen or twenty millions to the gold calculations of the world, without a corresponding increase in the supplies of silver, the gold coinage of the world will become plethoric, and the whole amount of the gold depreciation or the largest portion of it will be sustained by us. The Pacific Railroad will serve in a manner to prevent such a loss.

"The silver mines of Mexico are inexhaustible and exceedingly rich, but they have ceased to be worked with activity, partly from the scarcity and consequently high price of quicksilver, and partly from the want of proper engines for pumping and working the mines.

"These had to be transported from Vera Cruz or other Mexican ports, across the mountains on the backs of mules, and, therefore, at an enormous expense. It needs no argument to show that very powerful engines cannot be moved on the backs of asses, and that many mines, which now cannot be worked, on account of the difficulties of drainage, the want of proper machinery, and the expense alluded to, would, if the expense of transporting the quicksilver and machinery to the mines, and the silver to the sea were lessened, be worked with great profit.

"It so happens that simultaneous with the discovery of gold in California, quicksilver mines of great value were also discovered there. Here, then, is a new source of supply of this metal for amalgam to the silver mines.

"Now the Pacific Railroad—should it take the Southern route, and this, supposing the Southern route to be as practicable as the more Northern one, should be a more powerful reason in its favor—will pass near the great mining and mineral districts of Northern Mexico. Private enterprise will shoot out branches in that direction, from the main stem, and quicksilver in abundance and machinery of ample power and capacity can then be delivered in the vicinity of the mines, cheaply and without difficulty, over this railway, and thus new life and vigor will be given to the working of the silver mines there, while we are at the same time providing for the common defence.

"Nor would the beneficial effects of this road upon these mines end here! It would turn their produce from the ports of Mexico, and

bring to this country, in exchange for the manufactures of New England, and other "Yankee notions."

"A southern route would bring the road near the northern provinces of Mexico, which are the richest and most desirable portions of that country, and all the people there, who could be supplied with articles of foreign merchandise more cheaply through our own country and over this road than they can through the ports of Vera Cruz and Tampico, and over the mountains on the backs of mules, would naturally depend on the railroad for their supplies. The extent of country to be thus supplied will be bounded by the line at which the freight and tolls on a bale of merchandise dragged by the iron-horse of the North, can meet with equal charges a similar bale brought on the backs of mules from the seaports of Southern Mexico. Below this line, the people of Mexico would continue to receive their supplies on the backs of mules, as heretofore; above it, their commerce would take the new and cheaper channel that this railroad would open.

"This dividing line between the locomotive and the mule cannot be distinctly drawn until the railroad shall have been in operation. But it may be safely assumed that the portion of Mexico that will then become tributary to the Pacific road and to the work-shops of New England, will not include less than three millions of people.

"A National monopoly in commerce with three millions of people who manufacture nothing, want everything, and who have nothing to give in return but uncoined silver and the precious metals! Was ever a commercial people offered such a temptation! There are no people in the world who buy of foreign merchandise more freely than the Spanish Americans. There are twenty millions of people in the United States. We import annually about one hundred millions of foreign merchandise. This gives an average yearly consumption of $5 worth, *per capital*, of foreign goods, notwithstanding we manufacture ourselves so largely and so extensively.

"The average annual consumption of foreign merchandise, *per capital*, in Cuba, is some forty or fifty dollars. But suppose that the Northern Mexicans, with the cheaper supplies and the increased facilities to buy which this road will afford them, shall, notwithstanding that they manufacture nothing, only buy on the average as much as the people of the United States, who manufacture almost everything, that will give an internal commerce at once of fifteen millions of dollars the year, which we will both fetch and carry, and which will be paid for mostly in bullion. These are but a portion of the advantages offered by this route for the road.

"There are the Mormons of Deseret and the people of New Mexico, who have now and for years will continue to have as much as they can do in contending with the wild beast and the savage of the forest, and in subduing the earth with the hoe and the plow.

"As with our Northwestern and Southern States, several generations will probably pass away before they will have the earth sufficiently subdued to turn their attention to manufacturing.

"They will, therefore, afford to the manufacturers of the East an immense business over this railroad. The old Santa Fe trade that was carried on by mules, will be nothing in comparison to it.

"The people of the Eastern States especially, have a stake deeply and richly set in this road, and, therefore, for sectional and moral as well as great national considerations, they are invoked to come forward in support of this great high tower of national defense, of power, and of greatness, and to unite with the people of the Memphis Convention in declaring themselves in favor of *the* route, and in pledging themselves to go for it, by that route, which, being practicable, shall best subserve the great purposes of national defense.

"The Memphis Convention, with a patriotism and a broad feeling of true nationality, which is beyond praise, laid aside all local prejudices and sectional jealousy, and declared itself in favor of the road to begin at the best point and to take the most suitable route, wherever that route and that point shall be found to be. It asked for the necessary surveys and examinations of the different routes, and expressed the opinion that the route commencing at the San Diego, thence up the valley of the Gila to the borders of Texas, between the parallels of 32 deg. and 33 deg. of north latitude, and thence to some point on the Mississippi between the mouths of the Ohio and the Arkansas, was worthy particular examination.

"The Convention acknowledged what we all feel—that information is wanting to enable us to decide as to the best route.

"The routes which seemed most to occupy the attention of the Convention, was the route just indicated, and the routes from Memphis, from St. Louis, and from some part intermediate between these two, as from the mouth of the Ohio to San Francisco or Monterey. The delegates from the northern valley States were in favor of a still more northern route.

"Now, in order properly to understand the claims of these several routes, let us suppose that, as far as topographical features and facilities for constructing the road are concerned, all of these several routes shall be found to be equally practicable. Upon what principle is the choice of routes to be made? That route should be selected which, being topographically practicable, will best subserve the great purposes of National defense as far as it can be done consistently with this great and prime object.

"The route may be modified so as to better subserve the great interests of commerce in peace, and the eastern terminus may be located so as to be most acceptable to all the States and convenient to the people.

"In the first place, let us see, always supposing all the routes to be equally practicable, which will best subserve the great object of national defense.

"The eastern terminus of that route is obviously the navy-yard at Memphis, where the immense naval resources of the Mississippi valley in war are to be gathered, and from which sails and cordage, rigging, provisions, and every item in the catalogue of ship chandlery, with men, and munitions of war, are to be poured in upon the Pacific over this road and its western branches to San Diego, Monterey, and San Francisco. If Government do not build branches to these ports on the Pacific, our citizens will.

"The southern route is the best for National defense because it will not be obstructed by the snows of winter, and will, therefore, be

vailable for the purposes of transportation at all times of the year.

"This route is better than one further to the North would be, because it would enable the Government at less cost of money and with less risk of life to preserve the nation's faith solemnly pledged before the world, by treaty, to protect Mexico from Indian incursions,

"With or without this road, military posts must be established along that frontier to carry out this article of the treaty. Having the road, a smaller force will be required for this service, and the same posts can execute the treaty, protect the road, and assist to keep it in repairs also. Therefore, as a matter of efficiency, as a work of national defense, and as a measure of economy to the nation, this route should be preferred, always supposing it to be practicable as it regards topography.

"Another consideration in favor of the southern route is to be found in the impulse which the road by that route would give to the working of the silver mines of Mexico and to the commerce with that country for which it would serve as a channel, and to which allusion has already been made.

"This work is to be built by the States out of a general fund, and for the common good. It should, therefore, commence at some central point on the Mississippi river, and which should be that point which is the most convenient to all the States for access. Nature and the internal improvements of the States indicate clearly enough where the point is.

"It is that point which is on the Mississippi river and is midway the valley between the head of the Gulf and the foot of the Lakes.

"It is that point between which and the Gulf the navigation of the river is at all times open.

"It is that point which the people of Iowa, Wisconsin, and Missouri, may reach with the advantages of down stream navigation.

"It is that point which is accessible to Illinois, Michigan and the Lake country through the Illinois canal, and which is also of convenient access to Indiana, Ohio, and Pennsylvania, with parts of Kentucky and Virginia, by the Ohio and Mississippi rivers.

"It is that point toward which Alabama, Florida, Georgia, the two Carolinas, and Virginia, are projecting and extending their railways.

"It is that point the route from which should be accessible to Texas and Arkansas as well as all the States. And that point is the city of Memphis, in the State of Tennessee. Memphis is 860 miles from the Gulf and 840 from Lake Michigan.

"It would be more convenient for Missouri, Iowa, and Wisconsin to meet the terminus of the road at St. Louis. But it would not add as much to their convenience as it would take from the convenience of Texas, Tennessee, Arkansas, and other States.

"Pennsylvania extends from the sea to the Lakes, and the people of all the States to the east of her who wish to travel by railroad must cross her borders to get to the terminus of the Pacific road, and whatever terminus and route be most convenient to her citizens will be most convenient also to the citizens of the States to the east of her. The routes of travel and channels of communication between Pennsylvania and the Mississippi river are various, and they are increasing in number, and, as a matter of convenience to her people and those of

New England, it will be about the same whether they have to come to Memphis or go to St. Louis to get upon this National road.

"If they come by the Lakes, they will find St. Louis most convenient; if they come by the way of Pittsburg, they will find Memphis quite as convenient as St. Louis.

"But if they come by sea to New Orleans or Charleston, or via Baltimore and Washington, over the Virginia and Tennessee railroad, the people of New England and New York will, in every one of these cases, find Memphis the most convenient point of departure for California.

"But as the road is to be built by the common property, or funds of all the States, and as they expect that the value of the public lands in the States through which this road is to run will be increased thereby, they may probably object to the Memphis route on account of Texas, and apparently not without some show or reason, for one of the collateral inducements for them to build the road is to be found in the expectation that it will greatly enhance the price and the sales of the public lands in the States and territories through which it may pass.

"If Memphis be adopted as the terminus, the road will probably pass through Texas, in which the General Government owns no lands.

"They belong to Texas, the roads will vastly increase their value, and the older States may object that their common property shall be so applied as to benefit one member of the confederacy to such an extent as a road built at their expense through Texas would benefit Texas.

"It is, therefore, submitted to the justice and patriotism of the people of Texas, whether it would not be wise on their part to imitate, to some extent, the example of Virginia in the noble disposition which she made of her Northwest Territory. That gallant old State had the right of eminent domain over Ohio, Indiana, and Illinois, but she generously ceded it all to the nation, and it was accepted without condition, save and except that slavery and involuntary servitude should never exist there forever. The extent of the imitation suggested in behalf of Texas is, that that State should concede at once and forthwith so much of her lands, lands belonging to the State, as may be necessary to carry the road through that State.

"Such an act of generosity would not be without its reward. There is in Texas, and the contiguous territory, an immense region which is a natural vineyard.

"The vines are cropped by the buffalo and the wild beasts. Thus dressed they produce the finest of grapes, which are pronounced by the German emigrants, who are preparing to cultivate them, to be capable of producing wines superior to the German wines. The roads would open that trade to Texas.

"Moreover, the embryo State of Deseret is mostly an inland basin, which has no sea drainage, and which, therefore, can never have any communication with the ocean except by railroad. Texas is the nearest to that basin, and, having less distance to send her produce, will, therefore, have the monopoly of supplying that State with many of the articles of commerce. Such an act on the part of Texas in giving

the lands would only be "casting bread upon the waters," for she would gather it all again when the road shalll be, as no doubt it will be, ceded to the States in which it may lie."

Having first based his argument in favor of the railway, upon the ground of National defense, he now brings it to bear upon the Southern or Gila route, provided this route should be found equally practicable. But he does not rely upon this alone: he brings up others to its support: it is to be the means of opening the silver mines of Mexico, by which the "calamity" apprehended from a change in the relative value of gold and silver is to be averted; it is to give us the commerce of three millions of Mexicans, whose bullion is to enrich the manufacturers of New England. Now, upon an examination of the map, it will be perceived that the provinces of Sonora and Chihuahua extend from the Rio del Norte to the Gulf of California; also, that they are about 400 miles long from north to south; and, according to McGregor, these provinces contain only 271,600 inhabitants. Cohahuila contains, according to the same authority, 75,340 inhabitants; and if we suppose that one-half of these reside in the northern half of the province, we shall only find a Mexican population of 309,-270 within about 400 miles of the railway. And if we include Cinaloa, Durango, and all Cohahuila, we should then find a population of only 656,558 within the distance of 600 miles of the road; and the greater portion of these reside much nearer the Gulf of California, the Pacific Ocean and Gulf of Mexico, than to the road. Now, we think, it can scarcely be expected that New England manufactures will be transported over railroads from Boston to the Gila, and, then packed on mules a distance of more than 500 miles, when they could be carried by sea to points more convenient for distribution, and at cheaper rates. Another argument in favor of this route is, that it will enable the people of Texas to send their produce to Deseret! Now, should the road be located in the valley of the Gila, it would not pass nearer than about 500 miles of the Mormon settlement. The nearest point would be about midmay between the Rio del Norte and the Pacific; and from this point we know of no road through the mountains leading into the valley of the Salt Lake, over which commerce could be carried, without returning east, and going through the South Pass. Truly, this Southern route is made to perform most astonishing offices! But admitting that it should be found serviceable as an agent in defending the Mexicans against the Indians, yet, our territory is infested with savage tribes for more than one thousand miles north of this line; and, do we not owe protection to our own citizens as well as to the people of Mexico? And were it true that this route would secure the commerce of 3,000,000 of the Mexican population, yet, would it not be better that we should, by locating the road through the centre of our own territory, encourage a continuous chain of settlements from Misssouri to San Francisco, and thereby furnish our own citizens with commercial facilities for 500 miles on each side, than to give one-half of its advantages to another nation? Indeed, to our mind, the proximity of the southern route to the Mexican line, is the strongest objection that can be urged against it.

But again, every one must admit that the gold of California constitutes the principal attraction of that country; and it would cost the emigrant to the gold region, about as much to travel from any point on the southern line to the Placers, as it would to go there from Missouri, were the central road in operation. The central route would pass through both Deseret and the gold region of California; and it would seem to be a reasonable policy, on the part of our Government and people, to aim at the development of our own mineral wealth, rather than construct a railway with a view to the encouragement of mining in Mexico.

Besides, considering the Pacific railway as a national work to be constructed at the national expense, it would, in our opinion, be unjust to locate it so far south as the Texas and Gila route, provided a practicable route can be found farther north. For, should a canal be opened across the Isthmus, that portion of our population which is located in the Atlantic and Gulf States would, for most purposes, have a cheaper route to the Pacific, and, consequently, but little use for the road; while the inhabitants north of the route possess no such advantages. We have no apprehension, however, that if a railway should ever be constructed to the Pacific that it will be located on the Southern route. But, aware of the influence of the author's opinions upon the public mind, and believing that he has not given sufficient consideration to the arguments in favor of the northern region of the western States and territories, we have esteemed it our duty to show wherein our views differ from his; and, moreover, we were unwilling that his arguments should remain unanswered, lest the friends of the southern route should conclude that they were impregnable.

ART. II.—LEWIS AND CLARKE'S EXPEDITION TO AND FROM THE PACIFIC.

Even previous to the purchase of the colony of Louisiana, the expansive and far reaching mind of Mr. Jefferson—that man of genius and judgment, of science and common sense—had anticipated the day when the energy and enterprise of American citizens would span the continent,—republican institutions diffuse themselves to the shores of the Pacific,—and the chain which binds the great confederacy of free States would encircle in its adamantine links the sovereignties of the eastern and the western shores, and he was then preparing and maturing a plan for the examination of this broad territory by competent American agents. On the 18th day of January, 1803, more than three months prior to the treaty of cession, by a special confidential message he recommended to the Congress of the Union that steps should be taken without delay for the accomplishment of this interesting object. The Congress having concurred in the view of the President and conferred upon him the requisite authority, he forth-

with commissioned Captains Merriwether Lewis and William Clarke, to explore the river Missouri and its principal tributaries to their sources in the Rocky mountains,—surmount their rugged and precipitous heights, and snow crowned ridges, and trace to the Pacific some stream "whether the Columbia, the Oregon, the Colorado, or any other which might offer the most direct and practicable water communication across the continent for the purposes of commerce." The letter of instruction drawn up by Mr. Jefferson himself further directs them to fix the latitude and longitude of all the remarkable points along the courses of these rivers to observe with attention the soil and face of the country, the animal, vegetable and mineral productions, the geological structure, and the climate with its successive changes in time and elevation; and to collect all the facts relative to the past history and traditions of the Indian tribes, their locations, characteristics, manners, habits, wars, laws and usages.

Merriwether Lewis was born on the eighteenth day of August, 1774, near Charlettesville in the county of Albermarle, Virginia, of a distinguished family. Fielding Lewis, an uncle of his father, married a sister of General Washington, his father William Lewis was the youngest of five sons of Col. Robert Lewis. Two of his father's brothers became officers in the Revolutionary army, and rendered substantial service to the cause which their whole family had espoused with unanimity and ardor. One of these, Nicholas, at the close of the war, commanded a successful expedition against the Cherokees, who, seduced by the agents of the British Government, had committed great havoc upon the frontier, by the murder and scalping of many helpless females and innocent children. He subsequently became the guardian of the subject of this memoir. The mother of our hero was of the respectable family of the Merriwethers, and to her tenderness, intelligence, and care, he owed those estimable traits which marked his subsequent career. After receiving a substantial education, and evincing a sound knowledge of practical affairs he entered as a volunteer in the body of militia called out to suppress the contemplated Pennsylvania insurrection and soon rose to the rank of Paymaster.

Whilst in Paris the mind of Mr. Jefferson was turned to the subject of western discovery by the well known attempt of John Ledyard, (whose views he warmly seconded) to traverse Siberia and Kamschatka, and from thence cross to our continent and explore its interior. The failure of this attempt occasioned by the jealousy of the Russian Empress only served to impress the design more deeply upon the mind of Mr. Jefferson, and in 1792 he proposed to the American Philosophical Society to employ by subscription some competent person, to explore the western regions by land. Capt. Lewis warmly solicited this position. Mr. Jefferson told him that it was contemplated that the person engaged should be attended by a single companion only to avoid exciting the Indians, but he still persisted in his solicitation. M. Andre Micheau, the illustrious author of the Flora *Borealis Americana*, offering his services they were accepted, and after receiving his instructions and proceeding as far as Kentucky, he was compelled to relinquish the undertaking by a peremptory order of the Minister of France.

In 1803, the act for establishing Trading Houses among the Indian

tribes, gave occasion to the confidential message already noticed of the 18th January. At the time of his receiving this commission Captain Lewis had been for nearly two years the private Secretary of the President, and with an intimate knowledge of his character thus acquired, Mr. Jefferson says, that he was "of courage undaunted; possessing a firmness and perseverance of purpose which nothing but impossibilities could divert from its direction, careful as a father of those committed to his charge, yet steady in the maintenance of order and discipline; intimate with the Indian character, customs and principles; habituated to the hunting life; guarded by exact observation of the vegetables and animals of his own country, against loosing time in the description of objects already possessed; honest, disinterested, liberal, of sound understanding, and a fidelity to truth so scrupulous that whatever he should report would be as certain as if seen by ourselves."

A few days subsequent to the reception of his instructions by Captain Lewis, the news of the treaty of cesssion was received at Washington, and the passport of the French Minister, which had been obtained, became necessary. He left Washington for the west, and at Louisville was joined by Capt. Clarke, from whence they proceeded to the Mississippi river, where they were detained until the following spring, by the delays which preceded the surrender of the country, which did not take place until late in December, 1803. They made an encampment at the mouth of Wood river, opposite that of the Missouri, where they remained until the succeeding spring.

The party consisted of nine young Kentucky volunteers, fourteen soldiers of the regular army, two French voyageurs (an interpreter and a hunter), and a black servant of Capt. Clarke. In addition to these, a corporal and six soldiers were engaged to accompany them as far as the Mandan village, in consequence of some apprehensions of Indian attacks. The stores were divided into seven bales, and one box containing a small portion of each article, as a resource, in case of accident. They consisted of clothing, utensils, locks, flints, powder and ball. To these were added 14 bales and one box of Indian presents. They embarked in three boats. The largest was a keel, 55 feet long—of three feet draught,—with one sail and 22 oars; and with a forecastle and cabin at the bow and stern, and lockers in the middle, so adjusted as to be raised for a breast-work in extremity. This was accompanied by two pirogues of six and seven oars; and two horses were led along the bank of the river for hunting.

On the fourteenth of May, 1804, the party entered the mouth of the Missouri. All which they had heard tended to excite deep interest—early adventurers had given glowing accounts of the region bordering the river, and the stories of the old fur traders teemed with marvellous adventure, and extraordinary dangers and escapes. With the aid of the sail, when the wind was favorable, and of the oar and cordelle when otherwise, they steadily ascended the turbid current, treading their way through swarms of snags and sunken trees, and rounding low islands and bars, covered with stunted cottonwood and willows, or shifting too rapidly to gather vegetation. On the eleventh day they landed at the little village of *La Charette*—the remotest white settlement upon the river. After bidding a final adieu to these last brethren of their own, whose faces they had so good reason to apprehend they

might never see again, their voyage was resumed. The broad, deep, alluvial bottoms bounded by distant ridges and bluffs, were densely covered with grapes, shrubs and flowers. The witch hazel, the alder, the willow, the paw-paw, the haw, and other small trees and bushes, were overshadowed by stately forests of walnut, poplar, linden, hickory, and cottonwood. They passed successively, many perpendicular walls of primitive limestone, on some of which the Indians had painted the images of their Manitous, whilst others threatened to crush the adventurers upon the stream over which they had stood the solitary sentinels of ages past. They met many rafts and canoes, loaded with the rich spoils of the mountains and plains. Some of these had descended the Osage from the spurs of the Ozark—others had brought down the rewards of the past year's trade upon the Kansas,—others had been freighted at the Pawnee villages upon the Platte,—and others had descended through robber bands, and varied hazards from the upper tributaries of the Missouri. The hardy men who manned those frail craft lightened their lots with many a song, the cadences of which harmonized with the measured stroke of the oar, and exhilirated their spirits around their camp-fires, by uproarious jests and stories of wild and perilous adventure.

The wild fruit became daily more abundant, crab-apples, mulberries, persimmons, plums, blackberries, goosberries, raspberries and grapes suspended in festoons, were scattered along the river valley, and the fish-hawk, the swallow-tailed falcon, the warbler, the blue bird, the swallow, the paroquet and other feathered songsters, sported and piped through the forests. At the mouth of the Kanzas, the first buffalo was seen. They observed a number of old Indian villages and trading houses, successively abandoned for positions farther westward as the game became exhausted. Forest trees of noble proportions adorned the vallies as high as the Big Sioux river, and the uplands and broad savanna's were garnished with a rich profusion of succulent gramina and brilliant flowers. The spectacle of a boundless succession of graceful undulations, expanding in every direction until they seem to mingle with the dim horizon, creates emotions which imagination can scarce conceive, and language is too barren to convey. Rain had occasionally descended, but not in remarkable quantities ; and such was the transparent purity of the atmosphere when the watery vapor was dispersed by the ever-active winds, that intensely brilliant rainbows spanned the skies, and the refracted light created a multitude of living pictures. Upon the Nemahaw, a number of mounds, and inscriptions on rock, similar to those found throughout the Mississippi valley, were examined. In their ascent they had met with parties of the Kanzas who resided about fifty miles above the mouth of that river, —of the Ottoes and Missouries, whose villages were near the mouth of Platte river—of the Pawnees, settled on the Loup fork of Platte—and of the Omahas, living just above the mouth of that great river. Passing the mouth of the Platte, six hundred yards in width, they paused on the 3d of August, at *Council Bluffs*. This is an elevated eminence, commanding an extensive and interesting view of the plains for many miles in every direction, and was selected by Captains Lewis and Clarke as an appropriate position for a military post. The suggestion was appreciated and acted upon. The name was bestowed

upon it in consequence of their having here collected representatives from each of the captious and quarrelsome tribes before noted---at this place--held a council—settled their difficulties, and smoked the pipe of peace. The river, in the year 1840, cut through the neck of the bend on which this place is situated, and has left it nearly seven miles from the stream.

On the 10th of August, they arrived at the base of the highland upon the summits of which the remains of Black Bird the great Chief of the Omahas repose. "A hill of yellow soft sandstone rises from the river in bluffs of various heights till it ends in a knowl about 300 feet above the water. On the top of this a mound of 12 feet diameter at the base and six feet high is raised over the deceased King, a pole of about six feet high is fixed in the centre, on which we placed a white flag, bordered with red, blue, and white. The Black Bird seems to have been a person of great consideration; for, ever since his death he is supplied with provisions from time to time by the superstitious regard of the Maha's." This celebrated Chief, we learn from other sources, possessed extraordinary mental capacity; but he resorted to the most nefarious practices to obtain the ascendary over his people. He established the reputation of being a wonderful Medicine man, by his cunning, ingenuity, and confidence. To strike the utmost terror into his rivals and enemies, he did not hesitate to resort to the use of arsenic furnished him by the villainy of the Traders. After this wo be to him who dared cross his purposes,—his fate was sealed,—for the fatal potion was sure to be infused into his meat or drink. Many ambitious spirits fell victims to his ferocity. On one occasion only did he manifest symptoms of remorse or penitence. One of his squaws having committed some trifling offence, in a paroxysm of fury, he drew his knife, and stabbed her to the heart. After looking upon her dead body a few moments in silence, the lines of his countenance suddenly betrayed anguished feeling, and he seated himself near it, covered his face with his robe, and remained in one fixed attitude for three days without tasting food or laving his lips with water. His people beseeched him in vain to have pity on them,—he was deaf to all their supplications and remonstrances,—and it was apprehended that he designed putting an end to his existence by starvation. At length a little child was brought into his lodge by its mother. She gently raised the leg of the Chief and placed the neck of the child beneath his foot. This aroused him, and he suddenly arose, harangued his people, and betook himself vigorously to his usual avocations. Black Bird was one of the first victims of the small pox, in 1800. In his old age he became corpulent, and was carried in a palanquin through the villages. Few chiefs have left a more imposing reputation behind them; and still fewer have been so long remembered with awe and gratitude. The flag placed upon his grave by Lewis and Clarke, has been continually renewed to the present day. Mr. Hunt observed it in 1811; and we ascended the eminence and meditated upon the character of him who slept beneath the verdant sod in 1843.

On a beautiful plain near the Calumet bluff, a council was held with the Yankton Sioux. These are one of the tribes of the great Dahcotah

race. The territories of this race then extended from above the mouth of the St. Peters to the Missouri. They are divided into seven tribes and eighteen or twenty clans and bands. They number about 10,000 fighting men—are the strongest tribe west of the Mississippi—and with the exception of some villages on the St. Peters, are strictly Nomadic in their habits. Their dress on gala-days, consists of profusely embroidered shirts, petticoats, and leggings, with moccassins. Usually, however, a blanket or robe, with moccassins, are the only garments of the men, and a petticoat of buckskin or calico, the only garment of the women. Ear and hair trinkets are common to both sexes. After smoking the pipe of peace with these people, the young people exercised their skill with the bow and arrow, for the amusement of their visitors; and at night, as is their custom, dancing and other festivities, were exhibited to honor them. Their musical instruments were a rude tamborine, and a little bag made of buffalo hide, with small shot or pebbles in it, accompanied by five or six singers. A horrid dissonance was kept up for many hours.

In some days they met with a party of the Teton tribe of Sioux, inhabiting the vicinity of the Great Bend---a spot where the river makes a detour of twenty-five miles, leaving only a neck of two miles in width between the upper and lower portion. Some difficulty occurred with these people but the prompt and decisive conduct of Captain Clarke soon brought the Chiefs to their senses. The ensuing day Captains Lewis and Clarke went ashore, and the manner of their reception by these Indians deserves special notice, because it corresponds in the minutest particular to a like reception given to Joutel by the Arkansas's more than a century before.

"They were met on landing, by ten well dressed young men who took them up in a robe highly decorated, and carried them to a large council house, where they were placed on a well dressed buffalo skin by the side of the Grand Chief. The hall or council room was in the shape of three quarters of a circle, covered at the tops and sides with skins, well dressed, and sewed together. Under this shelter sat about seventy men, forming a circle around the Chief, before whom were placed a Spanish flag, and the one we had given them yesterday. This left a vacant circle of about six feet diameter, in which the pipe of peace was raised on two forked sticks about eight inches from the ground; and underneath it the down of the swan was scattered. A large fire in which they were cooking provisions stood near, and in the centre about four hundred pounds of excellent buffalo meat as a present for us. As soon as we were seated, an old man got up, and after approving what we had done, begged us to take pity on their unfortunate situation. To this, we replied with assurances of protection. After he had ceased, the Great Chief rose, and delivered an harangue to the same effect; then with great solemnity, he took some of the most delicate parts of the dog, which was cooked for the festival, and held it to the flag by way of sacrifice; this done, he held up the pipe of peace, and first pointed it towards the heavens, then to the four quarters of the globe; and then to the earth; made a short speech, lighted the pipe, and presented it to us. We smoked, and he again harangued his people, after which the

repast was served up, consisting of the dog, some pemitegon,* and buffalo meat." Dances and other festivities followed of course at night.

Above the Council bluffs, groves of stunted cedar began to make their appearance on some of the heights and the numerous islands, and the forests became more sparse, until long naked stretches of miles would occur. Game abounded in great numbers, large herds of buffalo, elk ank deer, were descried at almost every turn, and the graceful antelope bounded with amazing speed from ridge to ridge, or described magnificent circles upon the adjacent plains.

A village of prairie dogs (*Louisiana Marmot*,) was seen for the first time near the mouth of the *L'eau qui court* river. After digging a depth of six feet to unearth one of these little animals, they run a stick down, and found they had not yet reached half way to the bottom. One of them was finally drowned out, after pouring five barrels of water into his subterraneous abode.

Among the Tetons a strange kind of police and summary justice was observed. A couple of squaws having gotten into a quarrel, a man approached from whom every one ran away terrified. He took the squaws and whipped them severely. Two or three of these officers are found in each village. They are appointed by the Chief, and it is a point of honor with them, to die in preference to disobeying him in any case. They are strictly peace officers, the badge of authority is two or three raven skins, attached to the girdle at the back so that the tails protrude horizontally from the body. Would not such an officer be of service in some of our villages?

In the middle of October, they arrived in the vicinity of the villages of the Mandans, Arricara's, Mimatarees, and other affiliated bands. The origin of the Mandans is not known,—the Arricaras are an off-shoot of the Pawnees driven up the Missouri by wars with the Sioux—and the Minatarees and Upsarokas, or Crows belong philologically to the Dahcotah stock. They are called by our travellers, Fall Indians. They bear a general resemblance to other Indian tribes, differing from the Sioux and some others in the fact that they build villages of dirt houses, and cultivate maize and pulse. Nothing astonished them so much, as Captain Clarke's negro York. They would not believe he was naturally black until they had attempted to wash him. York became so great a favorite, especially with the women, that he was overwhelmed with kindness, and had his hands full of love intrigues. The point of honor with the Arricaras is not that their wives shall be chaste, but that they shall never dispense their favors without the husbands consent. A number of husbands were even solicitous to obtain offspring from York, and vied with each other in attentions to him.

Here the party determined to winter, and near the village of the Mandens, on the north bank, in latitude 41° 21' 47" a fort was built. During the winter they occupied themselves in collecting

*This dish is called *pemmican* or *pemmegan*, by the Hudson's Bay traders and Indians. It is made in several ways Sometimes it is only dried, buffalo meat pounded,—at others, it is mixed with tallow or marrow, in the pounding,—and lastly several sorts of fruit, (as with the Sioux,) such as cherries, plums, gooseberries, currants, buffalo berries, &c., and pounded with grease and meat.

Indian curiosities, the skins and bones of animals, and such seeds and roots as the Indians could procure. They had a cheerful time of it living in great harmony with the Indians,—mingling in their sports and pastimes,—and exchanging the rites of hospitality. Their solitude was cheered too, by several visits of the traders from the British territories, who had well nigh monopolized the trade of the Upper Missouri. In November, a beautiful exhibition of the *Aurora Borealis* occurred; and on the fifteenth of January, a total eclipse of the moon.

With these tribes the punishment of adultery is measured by the power or caprice of the injured party. "One of the wives of the Borgne (a grand chief of the Arricaras,) deserted him in favor of a man who had been her lover before the marriage, and who, after some time left her and she returned to her father's lodge. As soon as he had heard of it he walked there and found her sitting near the fire. Without noticing his wife, he began to smoke with the father, when they were joined by the old men of the village, who, knowing his temper, had followed in hopes of appeasing him. He continued to smoke quietly with them, till rising to return, he took his wife by the hair, led her as far as the door, and with a single stroke of the tomahawk, put her to death, then turning fiercely upon the spectators, he said, that if any of her relations wished to avenge her, they might always find him at his lodge," but the fate of the female, excited no farther controversy. Two stone idols at that time, objects of great veneration with the Arricaras, are explained by the following pretty story. "A young man was deeply enamored with a girl, whose parents refused their consent to the marriage. The youth went out into the fields to mourn his misfortunes, a sympathy of feeling led the lady to the same spot, and the faithful dog would not cease to follow his master. After wandering together and having nothing but grapes to subsist on, they were at last converted into stone, which, beginning at the feet, gradually invaded the nobler parts, leaving nothing unchanged but a bunch of grapes, which the female holds in her hand to this day. Whenever the Arricaras pass these sacred stones they stop to make some offering of dress, to propitiate these deities." Indian mythology abounds in similar beautiful tales.

Having despatched a boat down the river with their collections, and a letter for the President, the party, on the 7th of April, 1805, resumed their voyage in six small canoes and two pirogues, with thirty-two men. Numerous flocks of swan, geese and ducks, covered the river, and they passed large numbers of abandoned Indian encampments. Passing the Yellow Stone, they approached the outskirts of the mountains,—the plains suddenly breaking into knobs and ridges; and on the 27th of May the first view of the great chain opened upon them. In the foreground, the surface rose in a gently ascending lawn, broken at intervals into abrupt cliffs, and opening all around in a rich woodland perspective. This brilliant amphitheatre presented groves of pine and poplar, scattered in every direction, whose openings were enlivened with herds of elk and buffalo,—the former selecting the steeps and upland slopes, the latter the grassy plains. From the west to the northwest stretched a long succession of elevated ridges, and far, far beyond the cold icy peaks, whose summits were crowned

with eternal snow, distinctly marked their pale outlines against the evening sky.

As they advanced, the wonderful and picturesque scenery of the mountains was rapidly revealed to their astonished eyes. Along the shores of the river, walls of soft white sandstone rose perpendicularly up, for miles together. The elements have worked these rocks into a thousand fantastic and beautiful forms, sometimes presenting the appearance of a long street of some ancient city, built up with a succession of columns, arches and architraves,—then the fragmentary ruins of a magnificent building, adorned with pilastres and sculptured spaces,—and then scattered. detached, and confused masses, with solitary domes and minarets, which seem "to mock the ruins they adorn." As they moved on, there seemed to be no end to this enchanting scenery, which presented new and more beautiful aspects at every turn of the river. It was as if seating themselves upon the miraculous carpet of the Arabian tale, they had been instantaneously transported into the region where the genii hold their court, and exercise their supernal powers in the creation of gigantic scenery and gorgeous palaces. Collonades, towers, domes, fortifications, cupolas, minarets, castles and villas, rose up in rapid succession, whilst smiling and flowery plains, deep forests, frowning mountains, and the solemn and melancholy music of flowing waters, hold the mind entranced for hours and days together.

On the 13th of June they approached the *Great Falls* of the Missouri. The river is here, three hundred yards in width. For many miles, the hoarse roaring of the rushing, boiling and tumbling water may be heard; and, as the morning sun pours his mellow light upon them, the curving and leaping fluid refracts the beams into myriads of capricious and changing figures, and the uprising mist is penciled into a succession of magnificent rainbows, which span the broad stream, and tremble with intense and flickering brilliancy. These great falls consist of a long succession of rapids and perpendicular descents. The first of these is thirty feet descent; the second, twenty-six feet five inches; the third, nine feet six inches; the fourth, four feet; the the fifth, three feet; the sixth, three feet; the seventh, two feet; the eighth, fourteen feet seven inches; the ninth, forty-seven feet eight inches, the tenth, nineteen feet; the eleventh, five feet; the twelfth, sixteen feet; the thirteenth, three feet; the fourteenth, three feet six inches; the fifteenth, three feet; the sixteenth, six feet; the seventeenth, three feet; the eighteenth, two feet; the nineteenth, thirteen feet; the twentieth, eighty-seven feet four inches; the twenty-first, six feet; the twenty-second, four feet; the twenty-third, thirteen feet; the twenty-fourth, eighteen feet; the twenty-fifth, six feet; the twenty-sixth, ten feet; the twenty-seventh, eight feet; and the descent of the whole, two hundred and sixty-five feet eight inches.

Making a portage of their canoes and baggage, by means of a rude truck-wheel wagon constructed for the purpose, the party resumed their voyage, almost enclosed on all sides by majestic ranges of mountains, the slopes of which were enveloped in shrubs and trees, and their rough ridges presenting an aspect of desolation. The air was chilled,—the water, through which they were often compelled to wade, towing or pushing their canoes, was intensely cold, and they were

surrounded at night by large numbers of grizzly bear, the fiercest, the most vivacious, and most powerful animal of the continent. Sometimes, torrents of rain, which seemed to be poured out in one mass, filled the valleys and ravines with a sudden and dangerous inundation; at others, a dense sheet of clouds would be expanded as if by magic, over their heads, and shower down successively or in conjunction—torrents of rain and hail, accompanied with vivid flashes of electric fluid, and thunder which shook the mountains to their deep foundations. A phenomenon which has since attracted the attention of all who have visited these enormous piles of primitive rock, astonished and excited the curiosity of the travelers,—This was an explosion, sometimes a single one, at others, five or six in succession, resembling the booming of distant ordnance. This phenomenon has been observed in northern Europe, and in the Andes. In the former country it has been attributed to the bursting of rocks occasioned by congealing waters in their crevices; in the latter, the Jesuits attributed it to the bursting of a small pudding-stone, in which a collection of rich jewels are deposited. Humboldt conjectures that it may be caused "by a disengagement of hydrogen produced by a bed of coal in a state of inflammation." The voyageurs of Lewis and Clarke were sure it was occasioned by the bursting of the rich mines of silver within the mountains. Perhaps, after all, the solution given us by a Crow Indian was as rational as any of these guesses: he said it resulted from the violent efforts of the evil spirits,—whom the Great Spirit had imprisoned in the bowels of the mountains, for their villainy to the red men,—to regain their freedom.

In some days, they ascended to the foot of the *Gate of the Missouri.* For five and three-quarter miles the river flows between walls of rock, elevated perpendicularly from its surface to the height of twelve hundred feet. It is obvious that it has burst its way through this immense barrier; for the trophies of its victory are confusedly scattered for several hundred yards below the outlet of the chasm. The weather-beaten masses of rock, the moaning sounds of the waters, the flashing streamlets which jet from the sombre walls, and the frowning mountains, and overhanging cliffs which encircle the perspective, concur to present a scene of intense interest and grandeur. Just below the falls, and at White Bear island, above them, the party had made *Caches,** in which maps, charts, notes, and most of the heavy baggage was deposited as a resource upon their return. Leaving the *Gate,* the party moved on to the three forks, to which they gave the names of Jefferson, Madison, and Gallatin. Ascending the Jefferson as the main branch, they reached its source on the 12th of August, after undergoing hardships, fatigues, dangers and difficulties, which are inconceivable to those who have never experienced similar things. "They had now," says the Journal, "reached the hidden sources of that river, which had never before been seen by civilized men;—and, as they

*This is a Canadian-French word, signifying a hiding place. The Indians are the inventors of the practice. A *Cache* is made by digging a round hole some feet deep, and surrounding the interior with sticks, leaves, and light brush. On these, the goods are deposited and covered successively with twigs and dirt, and the whole carefully closed on the surface, to correspond with the adjacent surface. In this way, Lewis and Clarke made several *Caches.* Trapper and hunter, as well as Indians, constantly use these hiding places.

quenched their thirst at the chaste and icy fountain,—as the stay down by the brink of that little rivulet, which yielded its distant and modest tribute to the parent ocean, they felt themselves rewarded for all their labors and all their difficulties."

Ascending to the summit of the ridge, from the slope of which the mighty river has its birth-place, their eyes rested alternately upon the scenery towards the rising and the setting sun. Turning to the east, imagination followed the tiny rivulet which they had just left, through broken and jagged cliffs, and verdant vallies,—until swelling into a mighty river, it pours its fertilizing waves through thousands of miles of expanded plains teeming with rich grasses, and beautified with flashing flowers ; turning to the west, the eye was attracted by a long succession of rugged mountains, and the imagination was strained to conceive what wonders could be hidden beyond their snow-crowned ridges and pyramidal peaks. The extreme navigable point of the Missouri river, was found to be in latitude 43 deg. 36 min. 43 seconds. Swarms of rattlesnakes were found along Jefferson river, and many signs of beaver, from their entrance into the mountains.

Their dams and houses were strung along all the streams, presenting frequently serious impediments to navigation. Grizzly and black bear, buffaloes, elk, goats and deer abounded, and it required no small care and caution to avoid the attacks of the first named animals. Indeed, many encounters, some of them of quite a serious character, occurred between these animals and several individuals of the party. One evening the hands in the hindmost canoe noticed one of them lying in an open space, about three hundred yards from the river, and six of the men, all crack hunters, went ashore to attack him. By creeping up behind a small eminence, they succeeded in approaching within forty paces unperceived. Four of them fired, and each lodged a ball in his body, two of which passed directly through his lungs. He sprang up infuriated and made towards them. The two hunters who had reserved their fire, complimented him with two more balls in his body, one of which broke his shoulder blade, and checked his onset. Before they could reload, he pressed them so close that they were compelled to run towards the river, and before they arrived there the bear had nearly overtaken them. Two of them jumped into the canoe, the four remaining instantly separated, and concealing themselves among the willows, fired as fast as they could load. The bear was struck several times more, but the additional wounds only served to aggravate his fury, and direct his attention to the party who last fired. At length he pursued them so closely, that they threw away their guns, and pouches, and sprang from a perpendicular precipice twenty feet high into the river. The bear sprang after them, and was very near one of them, when one of those on shore fired, and fortunately the ball passed through the head and killed him. On examination they found that no less than eight balls had passed through his body. On another occasion they met with an enormous bear of this species. When fired upon he did not attempt to attack, but fled with a tremendous roar of pain. Such was his tenacity of life, that after five balls had passed through his lungs, and five other wounds were inflicted, he swam more than half across the river to a sand-bar, and survived over twenty minutes. This one weighed five or six

hundred pounds, and measured eighth feet seven inches from the nose to the extremities of the hind feet, and five feet ten inches around the breast.

Captain Lewis had preceded the party with the hope of meeting the Shoshonees,—a tribe which has migrated from the sources of the Saskatchawan, to those of the Lewis river, and bands of whom are scattered as low down as the Kooskoosie. and as far west as the interior of the Great Basin of California. After being baffled several times by the timidity and suspicion of these people, the Captain was at length successful. He found their traits analagous to the tribes on the Missouri. Their accounts of the country westward were very discouraging. The provisions of the travelers were nearly exhausted, the game became much scarcer as they proceeded westward, and the Indians by whom they were surrounded were nearly in a famishing condition. No buffaloes roamed west of the mountains, antelope and deer were scarce, and an occasional salmon from the streams furnished by the Indians, or caught by the men, was nearly their sole support. On one occasion a hunter fortunately killed an antelope: a few moments after the entrails were removed, some of the Indians arrived, "and ran tumbling over each other like famished dogs, each tore away with whatever part he could, and instantly began to eat it, and no part which we are accustomed to look at with disgust escaped them." In this fearful extremity Captain Clarke examined the stream near which they were encamped, and to which the name of Captain Lewis was given to ascertain whether it was possible to descend it. In some days he found a line of stupendous mountains, stretching from north to south across the stream at right angles, through which it had burst its way and rushed for hundreds of yards through a narrow chasm, filled with jutting rocks, with a perpendicular wall of rock rising from the surface to the height of two thousand feet. Ascending the mountain on foot, he beheld a succession of these chasms, flanked by enormous piles of rugged rocks. The navigation was obviously impossible.

Rejoining Captain Lewis, they succeeded in purchasing twenty-two horses of the Indians, and resumed their journey. Proceeding some distance down the north fork of Lewis river, they turned northward across Bary, and up Fish Creek, and after literally cutting their way through thickets of vines and thorny plants, and laboring over angular fragments of rock, and around cliffs, and across chasms, and suffering appalling annoyances, they ascended the dividing ridge between the waters of the Lewis and Clarke rivers, and beheld a scene unparagoned in grandeur and sublimity.

On either side, beautiful and fertile vallies penetrated between the mountain ranges filled with an exuberant growth of grapes, shrubs and flowers. Raising their eyes from these delicious spots, they rested upon dark rich masses of interlaced vines and undergrowth along the bases of the mountains; —upon enormous pines, with their stiff, angular branches, and sombre hues, forming a dense stripe midway to the summit;—and upon interminable ridges and solitary peaks wrapped in a winding-sheet of snow. What a succession of brilliant lights and deep shadows;—of quiet and glassy lakes, and purling riv-

ulets, and leaping cascades, hallowed in rainbow hues ;—of gentle and waving plains, and abrupt and towering mountains !

Descending into the valley, they followed the windings of several little brooks, which led them to the great middle fork of the Columbia, to which the name of Capt. Clarke was given. Here they met with the Cotlashoots, a sept of a large tribe who have emigrated from the north, along the western spurs of the mountains, and now inhabit the upper tributaries of the Columbia, called Tushepaws. These people were rather fairer than the tribes previously visited : dressed in skins, and exhibiting evidences of uncommon activity and strength. Learning from them a direct route to the main Columbia,—after exchanging with them for fresh horses, to take the place of those injured in passing the rugged cliffs, and purchasing some more,—the party proceeded. Descending the Clarke some distance, they struck Travelers-rest Creek, a small stream coming in from the west, which they ascended, upon an old Indian trail, and again encountered the grand dividing ridge between the waters of the Lewis and Clarke rivers. So great were the impediments to their progress—consisting of piles of pointed rock tumbled in confusion from the mountain heights,—of large numbers of fallen trees,—of interlaced shrubbery and vines, and icy ravines and streams—that several of the horses were lost, and a number of the men well-nigh overwhelmed in despair. To add to their terrors, the game was exhausted : they were forced to subsist upon horse-flesh, and they could see nothing in the future which promised any alleviation of their sufferings. The shrill cry of the panther, and the mournful howl of the wolf, seemed omens of their fate. The imagination can conceive nothing more appalling than the scenes which presented themselves here. Livid gashes of ravines, dark deep gorges, giant precipices, rugged and desolate ridges, fearful, and apparently bottomless chasms, long, sloping and narrow paths, which must be passed over, and boisterous and boiling waters, all combine to impress the mind with images of power and terror. At one moment the eye rests upon rich and russet hues of waving slopes and fragrant oases,—and in the next, the senses were stunned by commingling sounds of moaning trees, murmuring rills, rushing cascades, tumbling rocks, and roaring torrents.

Even in the middle of August, ice was formed in the night, and about the 10th of September the snow began to fall. For twelve days the party dragged their weary limbs over rugged cliffs, across deep gorges, around fearful precipices, and over stupendous ridges clothed in perpetual snow, with no food but horse-flesh, and no definite idea of the region through which they moved, or the fate which awaited them. At length, they descended into the valley of the Kooskoosie, a tributary of Lewis river, where another scene of surpassing beauty opened upon them. In front of them expanded a long and fertile valley, garnished with rich grass, and delightfully contrasted shrubs and flowers,—whilst on all sides, a long succession of hills, ridges, and pointed peaks, rose majestically upward, until their distant outlines seemed mingled with the clouds. Golden, silvery, and purple clouds, rested their feathery folds upon them, and from the summits of the interior ranges, numberless streams poured their limpid water, —now glancing like silvery serpents down the russet slopes,—now

leaping in brilliant curves from the rocky ledges—and now pouring a snow-white sheet over solitary precipices;—until entering the beds of flowers in the valley they wound and lingered through, their rippling currents giving forth gentle and musical sounds.

In this lovely valley, they met a village of Chopunnish or Pierced-nose Indians, a clan related to the Tushepaws. Being informed that the "TWISTED-HAIR," their great Chief, was below spearing salmon, they proceeded to his encampment where they were received with kindness and hospitality. From a map which he drew for them on an antelope skin, they obtained a very good notion of western geography. Leaving their horses in the care of this Chief, and making another cache, they commenced the descent of the Kooskoosie in five canoes, and in sixty miles reached its mouth, passing over forty-four rapids and a number of shoals, at some of which portages were made of boats and cargoes. Thence to the mouth of Lewis river, some falls and twenty-three rapids were passed, many of them dangerous. At its mouth Lewis river is five hundred and seventy-five yards in width, and the Columbia, nine hundred and sixty yards. The country for many miles around their junction is an arid plain, where other vegetation than several species of cacti and frosty-leaved artemisia refuses to germinate. All the rapids of these streams are fishing places for the various bands of Indians who frequent their banks. The fish are mostly speared, but sometimes they are caught in wire or wicker work of shrubs, stretched from bank to bank. The rude residences of the Indians, built of logs, brush, skin and slabs, may be seen near them, and in the vicinity, the burial places of the dead who are wrapped in skins, deposited in the earth, and the spot marked by slabs of wood.

At the junction, the Sokulks, another clan of the Tushepaws were found, their traits corresponding to their origin. The sweating baths of the Indians of Oregon differ from those east of the mountains. They are built of clay, rectangular and closely covered in. The Indians enter them with hot rocks and water, and when the aperture is closed the water is poured upon the rocks until sufficient steam is generated to answer the purpose. Not unfrequently they rush from these steam baths and plunge into a stream of icy coldness.

As they descended Lewis river, excursions were made along its banks. In one of these, Captain Clarke shot a large white crane. The strange noise attracted the attention of some Indians, who, getting a glimpse of the falling bird, and afterwards seeing him approach, could with difficulty be persuaded that he had not descended from the skies. Such is the influence of ignorance and fear. On an island in the river, they examined a very singular Indian cemetery, the first of a large number of similar structures scattered along the stream. "This place in which the dead were deposited, was about sixty feet long and twelve feet wide, and was formed by fixing in the ground poles, with forks six feet high, across which a long pole was extended the whole length of the structure. Against this ridge pole were placed broad boards, and pieces of canoes in a slanting direction so as to form a shed. It stood east and west, and neither of the extremities was closed. On entering the western end we observed a number of bodies, wrapped carefully in leathern robes, arranged in rows on

boards, and covered with a mat. This was the part destined for those recently deceased, while a little farther on, there were bones half decayed and scattered about, and in the centre of the building there was a large pile of them heaped promiscuously upon each other. At the eastern extremity was a mat, on which were placed twenty-one sculls in a circular form; the mode of interment being first to wrap the body in robes, and as it decays the bones are thrown into a heap and the sculls placed together. On the inside were suspended fishing nets, baskets, wooden-bowls, robes, skins and trinkets, obviously intended as offerings of affection to deceased relatives. On the outside were the skeletons of several horses, and great quantities of their bones, sacrificed no doubt at the funeral of their owners."

As they floated onward novel and picturesque scenery opened upon them. Far to the west the elevated peak of Mount St. Helens, with its diadem of snow, pierced the deep azure of the skies, and yet farther northward the long blue line of the Cascade range, extended until they melted into the distant horizon. From the outlet of Lewis river about one dozen rapids were passed, and the channel was much obstructed by rocks. On the 22d of October, they reached the head of the *Great Falls.*

Here the river is separated into a number of channels by islands of black rock, the southern shore is lined with precipitous cliffs up to the waters edge, the northern expands into a desolate plain. The largest of these islands (a mass of rock) is near the centre of the stream. Between this island and the northern shore, there are three narrow crooked channels too impetuous to be passed in canoes. And again, at the head of the large island the southern channel is split by another island of some size, at the head of which there is a group of isolated rocks. The channel between these two islands is narrow. and rushes madly through, tossed into foam by the rocks in its bed. The channel between the upper island and the southern bank has a perpendicular fall of twenty feet near the head of the island, and at the lower point of the large island the united southern channels pass over a rapid of eight feet descent. The whole of the fall is thirty-seven feet eight inches descent. Around this fall a portage of 1200 yards was made by our travelers. One-third of this distance was over a solid rock, two hundred yards more of loose deep sand, and the remainder over hard firm ground. From the *Great Falls* to the *Little Dalles,** is a distance of near three miles of very rapid water. These narrows are occasioned by a high black rock which juts nearly across the channel from the north, leaving only a space of forty yards between it and a similar mass of rocks on the south bank. Through these narrows a distance of half a mile, the travelers passed in their canoes with great hazard, and to the astonishment of the Indians, for the channel was whirling, swelling, and boiling in every direction.

One mile and a half below the *Little Dalles*, a very bad rapid occasioned by immense rocks in the midst of the river, compelled them to make another portage. At the end of two miles more they

*The word *Dalles* is of Canadian origin, and means literally a trough. It is applied by the voyageurs to places where the rivers run through narrow chasms of rock. The Spanish term *Canone* is nearly its synonyme. The latter, however, is usually extended to deep cuts of streams through clay or sand.

approached the *Great Dalles.* At this place, the river is compressed between high black rocks for a space exceeding three miles, the whole width of the channel being from fifty to one-hundred yards. Throughout the whole distance the water swells, boils and whirls in a fearful manner, and the party made a portage of the goods, and let the canoes down with the aid of ropes held by the voyagers along the summit of the rocks. The whole distance from the head of the *Great Falls* to the foot of the *Great Dallas* is about ten miles, and the whole descent of the river about seventy feet.

At the *Great Falls* then resided the Eneeshurs, the last tribe connected with those near the forks of the Columbia. At that time some tribes above the falls had adopted the practice of compressing the heads of *female* children into a square form, those below with whom this custom originated, include both sexes. There is no philogical affinity between the tribes above and below the Falls, and they are contrasted in habits and superstitions. The lower tribes appear to have migrated from the north, following the line of the coast, and our travelers traced all the dialects to a common root. Near the falls the first regular constructed houses they had met with west of the Mississippi, were observed. Occasional vessels had supplied them with implements by trade. Their houses were usually constructed by digging a square hole six feet in depth, surrounded on the interior by palisades, with a ridge-pole from end to end, and a roof of poles, sticks and boards. In the interior were many carved images of animals and men, but these were not the objects of adoration. The staple of their diet is fish variegated with some dogs and a few berries. Their canoes are of white cedar or pine, very light, broad in the middle, and tapering towards the ends, with the extremities elevated and ornamented with carvings of the heads of animals. They manage them with great skill and dexterity. Above the falls myriads of salmon crowd the streams in the spring and summer, but few of any other species are found;—but below, the salmon, trout and several other species collect. At the falls, sea otters were seen for the first time, and in great numbers.

Nothing was more astonishing than the gigantic forest trees west of the mountains. This great chain separates the continent into two almost distinct vegetable empires. Oaks, juglandes, elm--Magnolias and rhododendrons form the striking peculiarities of the eastern slope of the range; on the western only, one species of oak is found,—one of the rhododendron,—but eight varieties of pine, with cedar, white birch, and other smaller trees. Of the large trees, the gigantic *pinus Lambertiana* (Lambert's pine), is the most extraordinary. It attains a height of from one hundred and fifty to more than two hundred and fifty feet, varying from twenty to sixty feet in circumference, far surpassing

> "The tallest pine
> "Hewn on Norwegian hills to be the mast
> "Of some great Admiral."

Mr. Douglas counted *nine hundred* annual rings in one of these trees.

In some days, the party reached the *Great Shoot* or *cascades*, passing in their descent, a number of Indian villages, and the fertile and timbered valley of the Wallamutte. The mighty mass of waters has here cut its way through a chain of towering, volcanic mountains,

rushing with resistless impetuosity over rocky reefs and dislocated cliffs, for three or four miles. On both sides of the furious waters, perpendicular battlements of rock rise majestically up, hundreds of feet, from the surfaces of which, a thousand rills, rivulets, and spouting springs issue forth, rippling, leaping, curving and dashing; now expanding into flashing sheets, then springing into pellucid cascades, and again, striking jutting rocks, and exploding in sparkling clouds of mist; whilst a dreamy, unearthly and marvellous succession of soft, mellow, and brilliant hues wave over and around the whole. A portage of two miles, in descending, and three in ascending the river, is here usually indispensable. Below the cascades, groups of Indian huts, and burial vaults appeared, and flocks of swan, geese, ducks, brant and sea-gulls, floated over the quiet waters. Deer and elk too, became abundant.

On the 7th day of November, after eighteen months of toil, exposure, dangers, and privations, their eyes opened, for the first time, on the boundless expanse of the Pacific Ocean. As busy memory arrayed for their contemplation the thousand hazards they had passed through, and wonderful escapes they had made from the ferocity of beasts, and the fury of the savage—as their imaginations followed the shores of the great Ocean, until it pictured to them the broad countries which it watered, and the thronging millions who dwelt upon its distant shores,—as they meditated upon the wide space which separated them far from the comforts and security of civilization—and as they anticipated the weary journey yet before them, and thought of the treacherous, cruel, and vindictive character of the hordes which surrounded them, the hearts of the way-worn pilgrims were filled with sadness. But soon they thought with profound gratitude of that great and good Being who had "held them as in the hollow of his hand" when threatened with swift destruction; and of the immortal fame to which their names should be consecrated in after times.

ART. III.—RAILWAY ON THE NORTH SIDE OF THE MISSOURI RIVER.

We are pleased to learn that the recent movement in St. Louis, in respect to the Pacific railway, has awakened our citizens on the north side of the Missouri river, to the subject of internal improvements. The facts and arguments contained in the following communication are worthy of consideration; but our information in respect to the probable cost of the route on either side of the river is too vague at present, to authorise any conclusion upon that point. The Pacific railway company have no right to locate their road on the north side of the river; yet, it may be good policy to cause a survey of that route to be made before the meeting of the next General Assembly. And, if it should be found that the northern route is the cheapest; or even as cheap as the southern, its survey would stimulate the friends

of the respective routes to subscribe for stock; and, consequently, be the means of more certainly securing the construction of the road. But a line of railway on both sides of the Missouri river is necessary as main trunks of a system of railway improvements in our State; for a road on one side can afford but little benefit to the other. With these two lines completed, the one throwing off its branches in the direction of Arkansas and Texas, and the other in the direction of Iowa, we shall have laid the foundation of a system that may be extended almost indefinitely. And, we ask, can not this be done? If the people south of the river can construct a road, why may not those on the north construct one also? We believe those of the north possess more wealth, and quite as much enterprise. With a liberal donation of land from the General Government, which, we believe would be granted, and a manly effort on the part of the people, the work could be accomplished in a few years, and, the wealth of the country greatly increased.

In connection with this subject we beg to suggest to the people on both sides of the Missouri, whether it would not be well to call county meetings, and get up petitions to Congress for a donation of lands in aid of the work? We understand that the directors have forwarded a petition; but, a movement on the part of the people would, we think, add weight to their application, and make our delegation in Cougress more active and vigilent. We do not know, certainly, how much land the Directors have asked for; but we are of opinion that when the objects of the work, and, the quantity of public lands in Missouri are properly considered, it is not unreasonable to ask for 1,000,000 acres. And we believe that a grant of this quantity can be obtained with as much certainty as a less amount. EDITORS.

To the Editors of the Western Journal.

In regard to the Pacific Railroad from the city of Saint Louis westward, much has been said and written; and locations minutely traced out, in the closet of the engineer and politician, from beginning to end. These closet Legislative locations of railroads will not always hold good, and should only be appreciated in proportion as they may tend to throw light on the subject, and hold up to the view of the country, the company and the engineer corps the facilities to be gained on the variousr outes proposed—so that the most conspicuous may undergo a reconnoissance, and if worthy of it, an instrumental survey, to determine definitely its merits.

In a great work like this, it is well that all who have correct ideas, or knowledge bearing upon the subject, and which may prove useful, should speak out boldly; and it is with this view that it is proposed to take a short survey of the routes on the north and south side of the Missouri river, and the arguments advanced in favor of each, without attempting to prejudice popular feeling either way. Engineers, in the surveys, locations and construction of railroads, deal entirely with facts.

In the outset, we will lay it down as an axiom, that capital, combined with American genius and enterprise, is equal to the task of constructing a good road over, under, or through any country we have this side of the Rocky Mountains: but, at the same time, when there is a choice, the best route should be adopted.

In the first place, we will remark that, it has been well and truly said of "The southern slope of the main or Ozark Ridge, as he approaches its eastern terminus, to the geologist, becomes strikingly interesting; and having reached the waters of Currant river, he is involved among hills, knobs and mountains—the topographer has no business there." This remark will apply to the whole Merrimac country, and extends up to the very summits of the rock cliffs, whose bases are washed by the southern shore of the Missouri river. But topography is a part of our vocation, and we would say that for making lively and beautiful sketches on the page of the note book—it is the country—but no place for railroads, if a better can be found which will accommodate the same trade.

In the minds of many, the southern bank of the Missouri river, from Bonum bottom to the Lamine, has been fixed upon, ahead of all surveys. A few reflections on this subject may lead us to examine some other route; and then, all things considered, of the two, choose the most favorable.

It must be borne in mind that the Missouri river is subject to great overflows, and, in passing up its southern bank, the road bed must be placed sufficiently above high water mark to be beyond the reach of floods. This will, at once, lead to a continuous series of heavy cuts and fills, the most of which must be rock excavation, varying in depth from five to perhaps over one hundred feet. Then, again, the embankments will often require to be faced with rock or stone walls, in order to secure them from being washed away by floods. Every little drain or rivulet—almost every indenture in the cliffs—will require a stone culvert, of greater or less dimensions; which, altogether, with the bridges, will constitute a large item in the endless expenses of keeping the road in repair. Besides all this, to Jefferson city, you pass not through a country, but alongside of a barren region which feeds nor yields scarcely man or beast. And, upon arriving at the western boundary of the State, in (Van Buren) Cass county, you are twenty-three miles south of the Missouri river, and thirty-six, or forty miles out of the direct route, with the Kansas river ahead, and to be bridged before reaching the divide between Blue river and Big Nimehaw—thence to the Platte region.

Again, this route crosses streams which drain a larger area of country than would be by a line on the north side of the river: for this is what we are after, a comparison of the northern with the southern route.

It is estimated to require on the south side, upwards of three thousand feet in length of bridging! with Kansas river not reached, and to say nothing of the hundreds of stone culverts.

Now, we will suppose the route to St. Charles common to the routes on each side of the river. We there cross, and striking the slopes of the hills, soon rise by a gradual ascent to the top of a beautiful broad ridge, and continue along the same, passing between

Dardenne and Femmeosage Creeks, through Howell and Thornhill's Prairies, to Hickory Grove; Warrenton, and between the head waters of Charrette and Eagle Fork of Cuivre, to Pendleton, in Warren county, and Leweston and Danville in Montgomery county. Pursue the same divide between the head waters of Laoutre Creek and Cuivre river, leaving Locust Grove in, Audrain county to the south—or cross Loutre at Danville, passing Centreville, in Calloway county, and on to the ridge in Audr in, as before. Thence, leaving Cedar and Rocheperoee Creeks to the south, and the south fork of Salt river to the north, pass through the corners of Boone and Monroe counties, to Smithland, in Randolph, and Roanoke, on the northern line of Howard county—crossing East Chariton south of the middle fork, and Main Chariton, south of Ketesville, in Chariton county;—cross Palmer's Creek, and on to Brunswick, near the mouth of Grand river, crossing this river near its confluence with the Missouri, thence continue up the Missouri river—or, if practicable, by Pleasant Park and Manlius, to Carrolton, on Waconda Creek, in Carroll county—with the Waconda, or some tributary across to Crooked river, and Richmond, in Ray county, or, crossing north of Richmond, take the west fork of Crooked river, cross Fishing Creek below the east fork, and north of Liberty, in Clay county, near Barry, to some point on the Missouri river, between the mouths of the Kansas and Platte, at or near Parkville—or, from Grande river take the divide by the lead mines, between Big and Waconda Creeks, thence across Platte river and Bee Creek, to Weston, in Platte county—and on to the Plains. This route passes from five to thirty miles north of the Missouri river, and through the most fertile portion of the State.

Having traced our route on the northern side, to the western boundary of the State, let us compare notes awhile. We find that the north side is comparatively a straight line, only occasional light curves and comparatively light grading—the excavation composed almost entirely of earth. That each line will admit of easy grades; and that the southern route, from the fact of having to adhere to the range of the Bluffs, must, where their direction changes abruptly, encounter heavy curves, excavation or embankment, or perhaps all three combined. And this excavation in the main, rock work, which will cost on an average, as compared with earth, from three to five times as much per cubic yard. The length of the southern route about two hundred and sixty one miles and the northern two hundred and fifty-two miles.

From St. Charles to Chariton is one hundred and thirty miles, with not a stream to cross—not a bridge to build! and only occasionally a culvert when crossing the head of breaks in the ridge which may be necessary to form ponds in order to obtain a supply of water for the locomotives. Besides, on the south the track running along the northern base of the cliffs will be much more liable to bank up with snow, than that on the beautful upland prairies of the north side.

In Vol. 2d No. 5, page 297 of the Western Journal, and to which we would direct the attention of the reader; it is said that a much greater amount of water is received into the Missouri river from the north than from the south side. Directly the reverse of this assertion

appears to be the fact. The whole area drained into the Missouri river on the south side is equal to 19,850 square miles.

On the north side, from the city of St. Charles to Chariton river is 2100 square miles. The country from Chariton to Platte river, including the tributaries of these streams to the northern boundary of the State, is equal to 12,960 square miles. From where the northern boundary line leaves the Desmoine river, west to Platte and including the head and tributaries of this stream, as also of Grand and Chariton rivers, in the State of Iowa, is equal to 3,500 square miles. Making in all on the north side, so far as the road is concerned, 18,560 square miles, against 19,850 on the south side. But a fair estimate on the north side would be to deduct the area from St. Charles to Chariton, as all of those streams are headed; this would leave the total area on the north side 16,460 square miles, against 18,850, a difference in favor of the north side, so far as our road is concerned, of 3,390 square miles of surface drained.

So far from the whole north half of the State being drained into the Missouri river, there is Cuivre and many other small streams, together with Salt river, which head in Iowa, and is partly included in our estimate for that State—all flowing into the Mississippi river and draining an area of 6,430 square miles.

Again, to the western boundary of the State, by the two routes the north is about ten miles the shortest; and to a point, common to both routes, on the divide between Wolf and Blue rivers, west of St. Joseph, the northern route is thirty-six miles the shortest. Well, now let us take the route to St. Charles as common to both sides. From St. Charles to Chariton, one hundred and thirty miles, will cost at least $5,000 per mile less than the same distance on the south side; this is equal to $650,000; to which add for thirty-six miles greater distance on the south side, at $25,000 per mile $900,000 and we have the round sum of $1,550,000 saved by the northern route.

In speaking of light or gentle curves on the two routes, it is understood the radius of curvature must not be less than from three to five thousand feet in length.

The grade is an imaginary line drawn through the hills and across the hollows in the direction of the roadway, and is either level or inclined; when the hills shall have been cut down and the hollows filled up to this line, the grading is said to be complete. Strictly speaking, all inclined grades are "Inclined Plains," but in the general acceptation of the term, are only called inclined plains when the rate of inclination is so great that a locomotive with its train cannot ascend without the aid of stationary power. With this explanation of inclined plains, it is believed that none will be required on either route from St. Louis to the South Pass.

In the summer of 1837, a steam engine built by Mr. Norris, at Bush Hill, left Columbia with a train of thirty-six cars—the total load being 172 tons—and proceeded to Philadelphia, a distance of eighty-two miles in eight hours—weight of engine nine tons. With this great load it passed up the "Gap grade" of forty-nine feet rise per mile, at the rate of ten miles per hour. On a grade of thirty-two feet per mile, for nine successive miles, a speed of twenty-five miles per hour could have been attained. On this road, are some short curves.

These facts offer great encouragement to persevere in the construction of railroads; but are no argument in favor of high grades and short curves, when the nature or topography of the country will admit of their being avoided.

On the line of our route, as sketched out, and adjacent thereto, is an abundance of fine coal. At Camp Branch, near Danville, it is so abundant and easily mined that it is proposed to deliver it at the pit for one cent per bushel. In Calloway county, coal of a fine quality is abundant, and in seams ranging from nine to twelve feet in thickness.

With a good railroad through such a country, coal from Camp Branch, in Montgomery county, could be delivered in St. Louis at as low a price as it can now be obtained from the mines within six miles of that city. To Camp Branch is about seventy miles, and at the rate of one cent and fifty-four hundredths per ton, per mile, which is about the rate charged on the Baltimore and Ohio Railroad, the transportation would cost less than four cents per bushel.

The north side is essentially an agricultural country, famed for its grain, hemp, tobacco, and stock, and must soon have some outlet other than the Missouri river. Would St. Louis retain this trade? if so, it must be accomplished by the construction of proper roads. The north side looks to Saint Louis as the natural depot for its surplus productions. Shall she in vain look for aid from this quarter?

The time is passing, if not already gone, when the citizens of Saint Louis can rest with folded arms, and grow rich upon her natural resources; if she does not bestir herself, the sceptre will depart from her. Already are our neighbors to the east looking to the immense surplus productions of northern Missouri; and you might as well try to confine a powder magazine after the match has been applied, as attempt to coop up Yankee skill and enterprise. This trade, if not secured, will depart and much of it pass by way of the Lakes to New York.

We are of that school whose faith is strong: we believe the greater the number of judicious and substantial improvements made in a city or State, the better able will that community be to originate and prosecute successfully, other improvements: and, now, if you will, let the North, the South, and the Centre, have their railroads terminateing at St. Louis.

We are naturally inclined to favor self-interest in carrying out public as well as private improvements; and has not this feeling operated in drawing the location of the Pacific railroad through the knobs of (Van Buren) Cass county, with a view to its being intersected by the great Independence and Missouri river—or White river railroad? And will this intersection be a sufficient inducement to draw our main trunk thirty-six miles out of the true direction?

Judging by the description which travelers give, from Fort Leavenworth between Big Nimehaw and Blue rivers, thence to the Platte, no country offers greater facilities for the construction of railroads, so far as relates to light curves, lengthy tangents and easy grades.

Col L. E. Powell, who commanded the United States troops in the Platte country during the Mexican war, states that from old Fort Kearney on the Missouri river, to the south fork of the Platte is two hundred and ten miles; that its banks never overflow; and in all

this distance but two tributaries, of any size, put in on the south side. The first is the Saline, fifty miles above its mouth, which is only sixty feet wide. The next, fifteen miles farther up, is a small creek only eight feet wide, and thus it would appear that this country is admirably adapted to the location of railroads.

Should this article have any effect to stir up an inquiry into, and an examination of the most feasible routes for the location and construction of the St. Louis trunk of the Pacific railroad, it will be ample remuneration for the labor bestowed—be the route through our State, either to the north, or to the south side of the Missouri river.

ART. IV.—NEW MADRID, MISSOURI.

To the Editors of the Western Journal:

I have thought that a few incidents of the history of one of the early Spanish settlements, on the western shores of the Mississippi, would not be devoid of interest to the many readers of your Journal, particularly Missourians: you will, if the following meets with your approval, give it a place in the columns of the Western Journal.

It appears to have been the policy of both the Spanish and French Governments; to extend the area of their possessions, by the establishment of villages, towns, forts and other public establishments; leaving the settlement of the wide spread forests, to the future emigrant or pioneer: a town could not be established, a settlement made, unless the projectors were clothed with certain powers of government.

The commandants, exercised considerable regal power, they possessed not only military, but civil and judicial authority, over the inhabitants: to them were intrusted the regulations of trade and commerce, with their American neighbors, and the numerous Indian tribes; the dispossl of the soil by grants, concessions, etc: subject only to the confirmation of the Vice Roy of the King. Whenever it was deemed of interest to His Majesty to make a new settlement or colony; a competent person was sclected to explore the uninhabited part of the domain; and make a selection for the site of a new village, town, or military post: then came the appointment of a commandant, clothed with all necessary power, to administer the affairs of government of the new colony—around these nuclei of civilization, soon sprung up a thriving population.

The lapse of time has proven the sagacity and forethought of the early pioneers of New Spain, in the valley of the Mississippi; as there is scarcely a village or town founded by them, that does not, to this day, possess many natural advantages for trade, commerce and industrial pursuits, over all other points, on the banks of the great Mississippi. The ancient town or Post of New Madrid was established some time in the latter part of 1788, or, of the first of 1789 by one Jacque Clamorgan, a Scottish adventurer; who at that time held some post under the Spanish government. He received the authority to make the establishment from Gen. O'Riley, Lieutenant

General of Spain, who was then the chief of the Department at St. Louis. From an ancient map of the old town made in 1793, (now in the possession of the writer) the founder of New Madrid must have been impressed with the idea of her becoming the metropolis of the Mississippi valley, and in the course of time would rival her namesake, the far famed capitol of old Spain. The town originally extended from the mouth of Bayou St. John, on the east, to the outlet of Lake Ste. Marie on the west, fronting about one mile on the river, and running back to the depth, of the same extent; where the town was separated from the plantations, by a wide plateau or commons. The streets of the old town, were very wide and spacious, crossing each other at right angles; in different parts of the town, were left large sqnares for public buildings, churches and pleasure grounds. The town was laid out upon a beautiful plain, of cresent form, above the highest stage of water; in the centre of one of the most extensive bends of the Mississippi, with a delightful and commanding view for several miles both up and down the river, and surrounded by the finest lands in the Delta of the father of rivers, for miles in extent; presenting to the eye of the emigrant one of the most picturesque places in the west; such, reader, was New Madrid in years gone by. Founded in 1789 by Spain, ceded in 1801 to France, and transferred again in 1804 to the United States. The writer has been informed, by some of the "oldest inhabitants," that the different changes of Government, all took place in one day; (that is, so far as delivery of seizen was concerned) this was in the year 1804, when the Government of the United States took possession of the public property in the Fort, Archives &c. One Fouchey or Fourchet, was appointed the first commandant of the Post of New Madrid; but under his administration, but few emigrants arrived. He was succeeded in the year 1791, by Don Tomas Portell, who discharged the duties of civil and military commandant up to the year 1796. Many emigrants arrived during this period, principally from Canada, Vincennes and Kentucky—and New Madrid became quite a place of note. Don Carlos Dehault Delassus became commadant in 1797, and continued in office until 1799; during his administration of affairs the town continued to flourish, and the surrounding country became settled; a great many grants were made to the numerous emigrants from Virginia, Pennsylvania. Kentucky, Maryland and the other States of the confederacy; and also from Canada, Vincennes, Kaskaskia, St. Louis and Cahokia. Don Henri Peyroux De La Coudrienere, succeeded De Lassus about 1799, and continued in office after the cession to France. Messrs. John Lavalle, Pierre A. Laforge and Dr. Richard J. Waters, all exercised the functions of civil commandants, pro tem, for a short time, until the country passed to the United States, and it became the district of New Madrid, Louisiana Territory.

From all the information, within my reach, I have been unable to learn much of the biography of the early commandants. Portelle was the only Spaniard who held office at this post, De Lassus, Peyroux and Laforge, were all natives of la belle France, Lavelle was a Canadian, Dr. Waters from Maryland. They are all represented to have been men of considerable energy; generally highly educated, easy in circumstances, endowed with good native sense; affable in man-

ners; they soon acquired great influence in the community; and became the *leading spirits* of the infant colony. Portelle and De Lassus left the country soon after retiring from office, Peyroux returned to his native land about 1810 where he died some years ago. Laforge, Lavalle, and Waters, remained in the land of their adoption; they became prominent men in the affairs of the country after its cession to the United States. They all lived many years after the change of government, and died regretted by the community, they left behind them numerous offspring, who retain the position of their ancestors in the old county of New Madrid. During the administration of Peyroux, the village of Little Prairie, about thirty miles below New Madrid, was laid out by Captain Francis Lesieur, a Canadian, who was appointed commandant of that village ; in a few years it became a flourishing village; the inhabitants were principally Canadians and Creoles, with a few hardy pioneers from Kentucky, Virginia and North Carolina.

The early inhabitants of the two places were generally intelligent, fond of adventure, easy in circumstances ; devoted to rational amusement, they sought wealth only as a means of enjoyment; and as the poet says "for the glorious privilege of being independent." Their era was marked with no important improvements in arts, commerce or manufactures ; they enjoyed a mild climate, a rich and productive soil, that was lavish in the production of the great necessaries of subsistence ; their exports of commerce, were confined to cotton, and the furs and peltries that were annually brought to the post by their Indian neighbors. These articles found their way to European markets by way of New Orleans and the great lakes of the north, and they received in return such commodities and luxuries not to be found in frontier settlements. They lacked that "go-aheadism" of this progressive age; but possessed in an eminent degree that urbanity of manners, that goodness of heart, that adds so much to the social relations of life ; and take them all in all they were a happy people. Such were the early pioneers of New Madrid and Little Prairie, but the ravages of time, and the encroachment of the great river, as she rolls onward to mingle her turbid waters with the ocean, have almost swept away, what was once New Madrid and Little Prairie. The old fort, the quaint old churches, their cemeteries, where the remains of their early fathers rested after the journey of life, all, all, lie beneath the turbid waters of the mad river ; in a few years more, there will scarcely be track or trace, to point the stranger, where once stood New Madrid and Little Prairie.

The present town of New Madrid was laid out immediately back of the old one, in the year 1820, it having been selected as the county seat for the present county of New Madrid ; after the boundaries of the county had been narrowed down to near the constitutional limits. The county of New Madrid in early times embraced, within her boundaries, all that portion of S. E. Mo. out of which the present counties of Scott, Mississippi, Stoddard and Dunklin have been formed : and the then county seat was Winchester, twenty miles north of this place. This place is beautifully situated for commercial and industrial pursuits ; seventy-five miles below the mouth of the Ohio ; uninterupted by the droughts of summer or the frosts of winter ; an unob-

structed navigation to the great commercial emporium of the valley of the Mississippi; and should now, if proximity to market, cheap transit upon the products of the county; great facilities both in commerce and agriculture; be a growing and prosperous town; the seat of an extensive inland trade; with N. E. Arks. and S. E. Mo., bound to us by cordons of railroads or turnpikes, threading their way to our neighboring towns, and binding us together in close brotherhood. No county in the State can surpass ours in the production of corn, (our great staple); wheat, oats, rye and potatoes yield well to the industrious farmer: our forests abound with the finest timber, such as oak, ash, walnut and cypress; this a great element of wealth, and in some parts of our common country, would give a livelihood to hundreds of industrious laborers.

Our swamps and lakes abound with great quantity of fowls and animals of the fured tribe, and are anually a source of profit to the hunter, and of considerable revenue to the county. No connty is better adapted to plank or railroads; and no where could they be built with less cost. A road could be built from this place, in any direction through the country, and not meet with an elevation where grading would be required over two feet. Bog iron ore has been found in the bed of a lake in this county, about eighteen miles from this place, and it has been pronounced, by competent judges, to be very rich. With all the natural advantages of position, soil, and climate, our place and county have not rapidly advanced in population, or general improvement. Three causes have had a tendency to retard our progress,—the first of which applies more particularly to the town, and the others to the country at large: our place being in the centre of a bend of the river, the banks are not permanent, but subjeot to continual falling, or *caving in*; every year the river encroaches upon the owner of the soil; and little by little, it slides away. This continues year after year, unless the river takes a mad freak, and finds a channel elsewhere. All the towns upon the Mississippi ,with few exceptions, from the mouth of the Ohio to the Gulf, have suffered from this cause; and their growth and prosperity checked. The second obstacle to our progress is, that our country has been visited by earthquakes—that in 1811-12 great damage was done to the country; and the inhabitants had to seek refuge in other portions of the west. Wherever New Madrid is known, her name is associated with earthquakes. The emigrant, as he wends his way westward, passes by the ill-fated place, and seeks a home farther West, South, or North: but the march of time is clearing away the rubbish that enveloped our true history; and the force of prejudice is fast giving way to the light of reason and common sense; and the overlooked and long neglected country is being sought out by the emigrant.

The third, and most potent obstacle to our advancement in wealth, population and prosperity, and at the same time, most easy of remedy is the great swamps or submerged lands that almost encircle our county; stretching along our northern and western boundary, until lost in "the big spread of Arkansas." Owing to the extent and magnitude of this evil, it is beyond the reach of individual capital and enterprise; and as the immense waste belongs to the General Government, the task of removing this blight upon our land, by early and speedy action,

is the duty of the Government. When in 1815, our population were suffering from the injuries sustained from the dire visitation of earthquakes, Congress magnanimously donated a part of her wide domain to each actual sufferer; although, our Government was then burthened with a heavy national debt. That calamity was sudden, and its injurious effects immediate. The one now, that preys upon us, grows with our growth and strengthens with our strength, laying waste immense tracts of fertile lands, and sowing the seed of loathsome disease among our people. Is it unreasonable in us then, to hope that Congress will again come to our aid, and rid our land of so great a curse; at the same time, be amply rewarded by the reclamation of some of the finest lands in the State?

I verily believe that the same quantity of land donated for the sufferers by earthquakes, in 1811-12, would reclaim this now valueless country; it would bring thousands of dollars in the Public Treasury, and afford homes to hundreds of our hardy yeomanry, instead of a refurge and hiding place to the beast of the forest.

With all the drawbacks that surround us, with all the prejudices against our climate,—the health af our country—the annual visitation of earthquakes—the rather dilapidated appearance of our village, as presented to the eye of the traveler, as he wends his way by us on the brow of the broad Mississippi—our couutry still, is steadily progressing, *slowly but surely* in her onward march. The industrious farmer is annually extending his possessions: the dense forests are giving way to the woodman's axe; and pleasant farm-houses are springing up everywhere. Wet and marshy lands that had lain vacant for years, have been brought, by the skilful farmer, into successful cultivation, yielding a rich reward to the deserving owner. There has been shipped from this point, from the 1st of August, '49, to 15th February, 1850, as follows: Corn, in bags from wharf-boat of Messrs. Cox & Wright, fifty-five thousand and ninety-our bags corn —equal to 129,550 bushels; Potatoes, one hundred barrels—equal to two hundred and fifty bushels; Oats, five hundred and twenty-six sacks—equal to twelve hundred bushels. From wharf-boat of Messrs. Watson & Dawson, thirty-one thousand five hundred and fifty bags corn —equal to seventy-eight thousand eight hundred bushels; four hundred and forty-seven bags, and barrels Potatoes—-equal to one thousand one hundred and seventaen bushels; eight hundred and five bags oats,—equal to two thousand and twelve bushels; seventeeen bags wheat,—equal to forty bushels. Amount of stock as follows: cattle, four hundred and seven head; horses and mules, fifty head; and hogs, one thousand four hundred head—-making the aggregate as follows:

Corn, -	208,300	bushels at	30c.	per bush.	$62,790 00
Oats, -	3,212	"	"	"	963 60
Potatoes, -	1,367	"	35	"	478 35
Wheat, -	40	"	60	"	24 00
Horses and mules,	50	hd. Avg.	$40	per head	2,000 00
Cattle, -	407	"	8	"	3,256 00
Hogs, -	1,400	"	2	"	2,800 00
Total, - - - - -					$72,311 95

From the following shipping points in our county, I have been unable to get the amount of shipments this season : James Bayou, Phillips' Landing, Martin's Landing, Toney's, Point Pleasant, Ruddle's Point, Cypress Bend, Little Prairie, Islands 16 and 18,—from all of which points considerable produce and stock are shipped. The furs and peltries collected here, are very considerable ; last year they amounted to upwards of fifteen thousand dollars ; and I have been informed by several of our merchants, that the collections this season will exceed last, several thousand dollars.

The increase of our slave population is greater (in proportion to population) than any county in the State, for the past four years. I have no doubt but the corn crop for 1849 (over and above for home consumption), will reach 600,000 bushels, which at 30c. per bushel, would amount to $180,000! The article of cord wood, for steamboats, is a considerable item of wealth to our inhabitants ; and the sales for the past year will average 50,000 cords, which at $1 25 per cord, amounts to $62,500! Ours is the only point below the mouth of the Ohio, to which a railroad could be built, from the northern part of our State to the Misssisippi river, that is not subject, or at least affected by overflow ; and I venture the assertion, if ever an examination is made by a competent engineer, for the location of the Lexington Railroad, through the mining region to the Mississippi, below the mouth of the Ohio, that New Madrid will be the terminus selected, if cheapness, practicability and a level country, are any advantages to be gained in the construction of thoroughfares. I sincerely believe that a road could be built from this point to our county line (twenty-two miles) in the direction of the great mineral regions, twenty per cent. cheaper, than the same distance in any other county in the State. Blest with a genial climate, a rich and productive soil, abounding with all the natural elements of wealth, the county of New Madrid requires but the application of the inventive genius of the age, the adoption of a liberal system of internal improvements, in the opening of direct and cheap thoroughfares to her immediate and less favored neighbors in South East Missouri and North East Arkansas, to make her one of the most populous and prosperous counties in the State. I feel deeply interested in the growth and prosperity of our giant young State ; and more particularly, in the old mother of counties, in South East Missouri ; and as she is the source from whence sprung many of the present growing counties in the South East part of our State, I would wish to see her adopt such a system of improvements that would add much to her wealth and population, and that in her old age, she would be a beacon light to guide her offspring in the way that leads to individual and national wealth, prosperity and greatness. Your obed't servant,

Wm. S. MOSELY.

New Madrid, Mo., March 1st, 1850.

ART. V.—SUBMERGED LANDS OF MISSOURI.

Among the published proceedings of the "South-western Convention," held at Memphis in November 1845, we find the following report on the Submerged Lands of this State. We publish it in this place, mainly, because of its connection with the subject treated of in the preceding article. But, whilst submitting it to our readers, we feel constrained to remark that the tenacity with which the General Government holds on to these lands, is unjust towards the States in which they are situated. Besides their influence on the health of the inhabitants, these swamps cut off a large district from the navigation of the Mississippi, and greatly retard its improvement. In their present condition these lands are not susceptible of being surveyed, and we can see no reason why the Government should desire to retain them, unless it is expected that sooner or later the people will drain them at their own expense, and then pay into the Treasury of the United States the value thus imparted to the land.

We begin to hope, however, that this speculating policy on the part of the Government, is about to undergo a change; and we trust that before the end of the present session of Congress, a bill will pass that body, relinquishing the Submerged Lands of Missouri to the State. Editors.

REPORT ON THE SUBMERGED LANDS OF THE STATE OF MISSOURI.

The deepest interest is felt by the inhabitants of the State of Missouri and the neighboring States to reclaim the submerged lands of the State of Missouri. The whole Union longs to see these immense tracts of land, which now lay desolate and unfit for cultivation, made to smile by the industrious hand of man. It is of the most vital importance to the West and South that the submerged lands should be drained and reclaimed, and rendered inhabitable. The portion of the State of Missouri inundated, comprises the counties of Cape Girardeau, Scott, Mississippi, Wayne, Dunklin and New Madrid. There is about 2,160 square miles which are low and swampy lands in the above counties. A great portion of the above counties is covered with water, and possess an alluvial soil, the lands are low and marshy, interspersed by streams, rivers, lakes, swamps, bayous, bogs and marshes: although a part of the swamps is not submerged by water the whole year; but the waters remaining stagnant on these low and marshy lands during the hot summer become very impure and putrid. The vegetation being very rank and abundant on this rich and marshy soil, mixes with the putrid waters, and when decomposed fills and renders the atmosphere impure and unhealthy, which adds greatly to disease; and, as the waters are dried up from these swamps, there is

a sediment, stench and poison left on them that causes disease and death, not only to those that live on their borders, but, likewise, to the inhabitants that live in the vicinity. A great portion of these swamps is not susceptible for the habitation of man, except a numberless group of Islands interspered, which are occupied during certain seasons of the year by trappers and hunters. It is a remarkable fact, that there is a chain of low, level and marshy lands, commencing at the city of Cape Girardeau, in Missouri, and extending to the Gulf of Mexico; and between these two points there is not a rock landing except at the small town of Commerce, on the west side of the Mississippi river; there, is furthermore, only one ridge of high land from Commerce to be met with on the west side of said river, which is at Helena, in Arkansas. From the city of Cape Girardeau, running into the State of Arkansas, there is a strip or tongue, 350 miles long, of beautiful and excellent lands along the western margin of the Mississippi, which is well inhabited, having an average of ten miles wide, and is entirely cut off, and stands isolated from the interior of Missouri and Arkansas, by the great swamps lying west of it, and deprives and cuts off all communication from the interior southern part of Missouri and northern part of Arkansas, for the distance above mentioned, to the Mississippi river. The inconvenience experienced and felt by the inhabitants west of these swamps in not being able to get the fruits of their labor to market, is very unprofitable and injurious to the commerce of the above mentioned States. The lands west of these swamps are very fertile and rich; the timber is unsurpassed in size amd beauty. It is much to be regretted that all intercourse with this beautiful country, in the interior of Missouri and Arkansas, is thus cut off, producing incalculable injury in point of Commerce and Agriculture.

The earthquakes of 1811-12, proved very injurious and disastrous to the south of Misssuri, and was felt far and wide. They changed the course of the streams and rivers, which occasioned the waters to spread in every direction: and made high land where it was low previous, and in elevated places sunk them—thus causing the rivers and streams to overflow a great extent of country. These earthquakes of 1811-12, are still remembered by many of our oldest settlers; when the whole land was moved and waved like the waves of the sea, and the majestic oak bent his head to the ground like a weed, and the terrible fact that the waters of the mighty Mississippi, opposite to the town of New Madrid, rolled up stream for ten miles, carrying on its bosom barks, keel-boats and every species of crafts, with a rapidity unknown, and causing destruction of property and life.

The swamps commence below the city of Cape Girardeau and extend to Brown's farm six miles below Cape Girardeau. This is the head of White Water or Little River swamps, which are divided from St. John's swamps by a chain of high lands, in the shape of a horse shoe, in Scott county. This high land is eighteen miles long and ten miles wide, and extends from Cape Lacreuse river to the town of Commerce, on the Mississippi river. Then from the town of Benton, which is on said chain of high lands, in Scott county, there is a tongue of land that extends to New Madrid, on which the large New Madrid road runs; the length of the road is thirty-eight miles;

and the tongue of land three miles wide; and makes the line of division between the swamps of White Water or Little River on the west; and St. John's swamps on the east of said road. Let it be particularly remarked, that the waters that flow east of the New Madrid road empty into St. John's swamps, and all the waters west of said road empty into White Water or Little River swamps.

There are four large swamps that originate in Missouri; that is to say, the White Water or Little River swamps, the St. John's swamps, the James' swamps, and the St. Francis swamps.

The White Water or Little River swamps commence between Cape Girardeau, and lie immediately west of said New Madrid road, except a small chain of it that extends along Cape Lacreuse river, which flows into the Mississippi, four miles below Cape Girardeau city, and are on the northern side of said chain of high hills that forms Horse Shoe, in Scott county; and then these swamps flow into New Madrid and Dunklin counties; then flowing into the State of Arkansas, and empty into St. Francis river, at a point west of Greenock in Crittenden county, in Arkansas. Their length in the State of Missouri, in a straight direction, is 103 miles, and 10 miles wide on an average, covering the counties of Cape Girardeau, Scott, Stoddard, Dunklin and New Madrid. These swamps are made by the overflow of the Mississippi river at their head, between the city of Cape Girardeau and the mouth of Cape Lacreuse; and by the lakes and streams on the west side of said swamps, and the Castor river, which empty said swamps of White Water or Little River.

The St. John's swamps commence below the town of Commerce, and at St. John's lake; and it is well to suggest, that this said lake is filled with rich iron bog ore, a specimen of which can be seen in my possession; and then the swamp continues to flow on the east side of New Madrid road, and empties itself into St. John's bayou, just at the town of New Madrid. These St. John's swamps are forty-five miles long and six miles wide. These swamps submerge the counties of Scott, Mississippi and New Madrid; and are formed by the waters of Lake St. John's, and the overflow of the Mississippi.

The James' swamps lie between the St. John's swamps and the Mississippi river, which submerge the county of Mississippi, and empty into James' bayou, at the dividing line between New Madrid and Mississippi counties. The James' swamps are thirty miles long and ten miles wide; between the swamps St. John's and James', are Mathews, East and Long Prairies, which are good lands. The James' swamps are formed by the overflow of the Mississippi river.

The St. Francis swamps commence in Wayne county, fifteen miles below Greenville; then dividing Stoddart and Wayne counties, and Dunklin in Missouri, and Green county in Arkansas; and then continue their course to a point west of Memphis, in Tennessee. The St. Francis swamps in Missouri are seventy-five miles long, and ten to twelve miles wide, and from the Missouri line, extend about seventy-five miles in Arkansas, and width, about twenty miles, and then lose themselves into the St. Francis river.

The following plan is submitted to drain and reclaim the inundated lands in Missouri:

The swamps of White Water or Little River are formed by the overflow of the Mississippi river, between the city of Cape Girardean and the mouth of Cape Lacreus river, a distance of four miles on the Mississippi. The only way of stopping this overflow would be by making a levee along the Mississippi, about half a mile distant from its banks, so as to make room for the caving in of the banks of said river, from the city of Cape Girardeau to the mouth of Cape Lacreuse river, to the high chain of hills in Scott county, which forms Horse Shoe. The cost of throwing a levee between the two above mentioned points, which is four miles long, would be, at six thousand dollars a mile, twenty-four thousand dollars. This levee would check the overflow of the waters of the Mississippi river from the swamps of White and Little River. These said swamps flow, as before mentioned, around a chain of hills in Scott county, and west of New Madrid road. Then it would be necessary to make a draining canal, commencing below Cape Girardeau city, to run through the above mentioned swamps, so as to collect and throw all the waters into White Water or Little River. This canal to extend to about west of New Madrid, where lie the big swamps of Little River; the length of said canal would be seventy miles. The cost of this canal, at three thousand dollars a mile, would be two hundred and ten thousand dollars. It would require another canal, commencing about twelve miles below Bloomfield, in Stoddart county, to run in a direct line below the town of New Madrid, which would drain a vast quantity of water from Lakes Nic Cormy and St. Mary's—all of which are branches of swamps of White Water or Little River. The length of the canal would be about twenty-five miles; the cost of it, at three thousand dollars a mile, would be seventy-five thousand dollars.

Then another canal from the swamps of Little River, to flow into the Mississippi, at Point Pleasant; that is, a draining canal, commencing just west of said Point Pleasant, about at the junction of Little River and Castor. The length of the canal about twenty miles; which would drain great quantities of water that cover Dunklin and New Madrid counties. It is well to state that Little River swamps, west of Point Pleasant, are twenty-seven feet above the level of the Mississippi waters at a medium stage; and Little River at a low stage—of which level was taken by Judge Turner of Virginia, a scientific gentleman, in the year 1825—for which information, and many other facts, I can refer to Godfrey Lesfleur, Esq., Col. Walker, Capt. Alphonsa Delarodesie and Richard Phillips, persons of great integrity, and very intellectual gentlemen; of whom mostly were born and raised on the borders of said swamps. The cost of above draining canal, at three thousand dollars a mile, would be sixty thousand dollars. The said Little River swamps then flow south, into New Madrid and Dunklin counties; and then into the St. Francis river, in Arkansas. It will be essential to remove all obstacles in Castor and White Water or Little River; that is, by removing all the trees, logs and stumps in the bed of said rivers, so that all the waters would concentrate into Little River, which empties into St. Francis in Arkansas, The cost of removing said obstacles in the beds of said rivers would be fifty thousand dollars.

The draining and reclaiming the St. John and James swamps would be by making a levee from the town of Commerce, in Scott county, along the Mississippi river to New Madrid, where the banks overflow; and said levee to be at half a mile from its banks. This levee would be one hundred miles long; and the cost of this levee, at five thousand dollars a mile, would be five hundred thousand dollars.

The St. John swamps will require a draining canal from St. John's Lake, to flow into bayou St. John's, about eight miles above New Madrid; then removing all obstacles in said bayou St. John's, the canal would be about forty miles long, which would reclaim all the swamps of St. John's; and would cost one hundred and twenty thousand dollars.

The swamps St. James would require a draining canal from its head, near Mathew's prairie, in Mississippi county, to flow into James' bayou, which empties into the Mississippi river, across the dividing line between the counties of Mississippi and New Madrid. Thus the canal would be twenty-five miles long; and it would be necessary to remove all obstacles, such as logs, trees and stumps, out of the bayous St. John's and James—and these bayous would be navigable for flatboats and keelboats. The canal would cost seventy-five thousand dollars; and removing obstacles out of St. John's and James' bayou, five thousand dolllars.

The St. Francis swamps can be drained and reclaimed by clearing and removing all obstacles from the bed of the St. Francis river; that is, from its head in Missouri, to the Arkansas line, so as to concentrate all the water within its channel, for fifty thousand dollars.

The amount of submerged lands in Missouri is 2,160 square miles, as far as it can be ascertained at the Land Office, making 1,328,400 acres. The reclaiming of these lands would afford sufficient remuneration to justify their vast undertakings. The amount of the cost of the whole work would be one million one hundred and sixty-nine thousand dollars. The lands are now valueless, and can never be made available without being drained and reclaimed. The proper manner of reclaiming these lands would be for the General Government to cede these submerged lands to the States, with the special condition enjoined upon the State of reclaiming them. The State would feel more interest in executing this work, for it would come under its immediate concern, and for the expense attending this work the State would be repaid by the sales of the reclaimed lands. The General Government can never dispose of these inundated lands, nor the fertile lands bordering on these swamps, without their being reclaimed, for no human being can inhabit on the borders of these lands without endangering his life. The voice of humanity speaks aloud, that these lands should be rendered fit for cultivation and for the habitation of man. Some of the best inhabitants of our State, and the old settlers of the country, live on the borders of these swamps. It is well known that they suffered much from the earthquakes of 1811, and 1812; and they braved many dangers in the last war, in the struggle with the savages;—it is but just, generous and equitable, that the Government should render their and their children's situation comfortable and wholesome. There exist strange and unknown diseases of the most dreadful and malignant character—dealing death in

every direction, and spreading throughout the southern part of Missouri, terror to its inhabitants. The poisonous winds blowing over swamps, seem to carry on their wings, death to the young, hardy, strong, infirm and old, alike. These lands are now valueless. These low lands are susceptible of being reclaimed; if so, would be unsurpassed in richness of soil, excellence of timber, and would invite thousands of immigrants to inhabit them; and towns and villages would spring up in the whole country, and an active population would cover its whole extent,—the lands would be made to smile with rich harvests that would cover its surface—the south of Missouri would be one of the garden spots of the West; for its lands would be level and beautiful, and would be as fertile as any on the face of the Globe.

All of which, with the accompanying Map is respectfully submitted.

I therefore propose the following resolution:

Resolved, That in the opinion of this Convention—it is both the interest and duty of the General Government to cede the inundated lands to the States in which they lie, with the special condition to drain and reclaim them.

FERMIN A. ROZIER, *Chairman.*

AGRICULTURAL DEPARTMENT.

ART. VI.—WOOL GROWING IN THE SOUTH AND WEST.

We extract from the Patent Office Report, the following able and interesting article on "wool growing," from the pen of Mark R. Cockrill, Esq., of Tennessee. No man in the United States has, perhaps, devoted so much attention to this branch of agriculture, as the author of this treatise; nor is there any whose statements and opinions upon this subject, are entitled to more confidence. The experience and observations of the writer have established some important facts which ought to be known and appreciated by every American.

The opinion prevails very generally, that the United States are not as favorable to the growth of fine Wool as Europe; and, especially, that the Southern States of the Union are less favorable than the Northern. Mr. Cockrill has proven that these opinions are erroneous: and he is entitled to the gratitude of his countrymen, for his efforts to remove their prejudices in regard to these subjects.

With a reasonable degree of attention, the South and West could produce an almost unlimited amount of Wool, without lessening, materially, their other products. This would be an entire gain to the wealth of the country; for, unlike our other staples, it would not impair the fertility of the soil. How long will the farmers of the West and the planters of the South, neglect this branch of husbandry, and refuse to improve so great a source of wealth?

WOOL.

NASHVILLE, TENN., *November* 1, 1848.

DEAR SIR: Your valued favor, requesting agricultural information, was duly received.

After some reflection, I have concluded to confine myself to one subject mainly—that is, wool growing; though your enquiries embrace many other subjects which have come under my observation.

The annual import of the United States is about eight millions of pounds of raw wool; when, in my opinion, we should export very largely; and if the opinions which I here introduce should aid in effecting a change, I shall be fully compensated.

In your annual report for the year 1847, I find sentiments expressed by Charles L. Fleischmann, Esq., from which I dissent. He says that "Prussian Silesia, a province in the north of Germany, has gained the reputation of producing not only the finest wool, but of being the *only market* where thorough blood can be obtained." He again says: "Several attempts have been made in the United States to raise fine wool, but they have never fully succeeded; and to effect a profitable result, we must bring from Germany a thorough-blooded flock. It will astonish some of our American farmers, when they are assured that a single ram is sold at from fifteen hundred to two thousand dollars." I contend that the United States is a better wool growing region than any part of Germany, or any portion of Europe; and that the low latitudes of the United States have advantages over the high. I contend that as fine wool is now grown in the United States as can be produced in Germany; and as thorough bred sheep likewise.

I contend, furthermore, that the low latitudes, from 36 deg. down to 28 degrees, in the United States, can grow as fine wool as any part of Europe or America; and that as fine rams can be bought in the State of Tennessee for fifty dollars, as those in Germany which sell for two thousand.

Holding these opinions to be true, I shall attempt to offer some of the evidence which produced them in my mind

In 1814, I found myself a young Tennessean, and the distant fame of the merino sheep, with his golden fleece, greatly excited my curiosity, and, in search thereof, commenced a trip to the east. Here commenced my study of sheep and wool growing; and from that period to the present I have given it close attention. I have kept samples of wool, with labels, giving the date, pedigree, &c., for thirty-five years. In 1823 and 1824, I imported from Saxony merinos of the purest blood; and from that date to the present I have samples of that importation with all the experiments I have made in crossing for improvements. I have many samples from the most improved American flocks, and many Saxon samples likewise. I have lately received from Mr. Taintor some samples of the best sheep in Europe, with two animals of the selection made for Mr. Scoville, of Connecticut, being from the best flocks in Europe. I have also the card of eighteen samples of wool made by Mr. Fleischmann, from the finest sheep of Silesia, and other sections of that country.

If, therefore, a study of thirty-five years—if endless experiments in the time, with diligence, perseverence and devotion to the subject—

should qualify me to judge of wool by the samples, and the qualities o the bearer by their presence, I have come to correct conclusions, as above stated; for, by comparison, I find Tennessee growing as fine wool as any of the samples before me, and there are many other flocks in the United States doing the same. This is not a general thing, of course, and I presume the fact was not known to Mr. Fleischmann when he said the attempts in the United States to grow fine wool had failed.

A few flocks in the United States have continued pure—the best importations from Saxony in 1823-24, when she had reached a higher reputation in her flocks than Spain, or any other division of Europe. From and after this period, the history of wool culture in Saxony shows that she gave up *quality* for *quantity*. But the thorough bloods that had been sent off to the United States before this, in the hands of a few careful proprietors, who have been true to the subject, still preserve all the beauties of the fleece which had given distinction to Saxony, previous to her change. These flocks now in the United States, produce wool as fine in fibre, freer from hairs and of greater length and softness, than the present German flocks; hence, I think it the best broad cloth wool grown on the globe.

The descendants of that importation in the low latitudes of the United States, are *superior* to those brought over; which I attribute to climate.

I have said above, that the low latitudes have the advantage in wool growing.

An opinion has long prevailed, and will not be changed till experience teaches otherwise, that the warm climate will not produce fine wool. This idea seems to be supported by illustrations drawn from those animals bearing fur. This is fair as an argument, but yields to proofs of a higher grade.

In 1839 I became a cotton grower in the State of Mississippi, in latitude 32 1-2 ° north, and removed my Saxony flock from Tennessee, in latitude 36 °, to my cotton plantation, where I kept them six years. I have the samples grown in that latitude, and consider them the best samples of wool I have seen. They possess more of the requisites for a perfect fleece and fitness for superior broadcloth than the produce of the same sheep in latitude 36 °—my present residence. I attribute it to this fact, that in Mississippi the food is better adapted to sustain a healthy condition of the skin, which is kept oily by warmth; green herbage and succulent food during winter as well as summer. The pores of the skin were not closed, the wool did not cease to grow, there was no fever from housing, crowding, and from dry food, but a regular, uniform, and continuous growth of fleece the whole year; which cannot, I think, be produced in any latitude as high as 51 °; which is the parallel passing through the north of Germany, where it is necessary to feed six months in the year—from November till May. But *economy* I rank as the chief advantage of the low latitudes, where lands are cheap, very cheap, and green food for winter as well as other seasons. My observations for six years' residence, and to the present time, by annual visits, in latitude 32 1-2 °, prove to my mind that the tendency is to improve rather than deteriorate the quality of the wool, even where the finest wools are attempted. A flock in the warm climates requires but little feed-

ing, a very small investment in land, and but little labor in preparing for winter; hence, economy points to a region south of 51° as the true sheep region.

If I have offered any evidence which would be satisfactory to others on the subject, I would suggest that the culture of wool be incorporated with that of cotton, as the *latter* seems to be depressed far below its *intrinsic value*—perhaps by over production; but, be the cause what it may, it is very low, and a suggestion of any plausible substitute would be worthy of experiment.

I suggest wool growing upon the tired lands in the cotton districts; sow down rye, peas, oats, and whatever else may grow well in that region, and pasture the flocks thereon; and in this way renovate and restore lands, instead of a more expensive method of manuring. This would increase the growth of wool and decrease the quantity of cotton.

The United States export two millions eight hundred thousand bales of cotton, and import eight million pounds of wool annually. In addition to the tired lands in the cotton region, there are many millions of acres of land in the south and west unfit for the plough, but yet growing excellent food for sheep.

The tendency of the merino is to ramble and take a great variety of food; hence they are better fitted for the hilly sections of the south than any other species of stock; and these lands which are now a tax upon the proprietors, might, by industry and attention, at some future day be covered with flocks, attended by shepherds, aided by his faithful dog; and thus convert the scattered herbage into the golden fleece, yielding profit to the industrious and wealth to the nation.

The growth of sheep adds to the necessaries of life. No food is more healthy and delicate for the table; no clothing more comfortable for man. There, must therefore, be a demand for these necessaries, (wool and mutton,) as we are so rapidly increasing in population.

When the councils of Europe and America assemble to deliberate and legislate, they appear clothed in the fleece of the superior merino flocks.

National pride should be stimulated at home, and an American congressman should feel proud when he can say "I wear a coat as fine as any nobleman of Europe, and the flock which furnished it grew in my own State, and was not imported from a foreign land." To my brother farmers of the west, and cotton growers of the south, I say it requires no importation from Germany or elsewhere; no large investment of capital in a foreign land to commence the wool culture, and to prosecute it profitably anywhere in the United States, from Maine to Texas.

Capital, skill, and industry, are requisite to effect great results in all pursuits; but much, very much, may be effected in wool growing, with a small stock of cash, when combined with other agricultural pursuits. Those of small capital may commence the business with a few hundred, or even one hundred ewes of the common stock, which may be purchased at one dollar each. Then select rams of thorough blood, from those flocks which have preserved pure the best Saxon importation of 1824. They are to be found in the United States, in Ohio, Pennsylvania, Connecticut, and Vermont; and if not certainly found *there*, call on *Tennessee*, and I know they can be found *there*.

It will not require two thousand dollars, one thousand five hundred dollars, six hundred dollars, or even four hundred dollars to purchase them, as it does in Germany, as Mr. Fleischmann shows, but merely the fraction of a hundred dollars. Do not hastily conclude that this great difference in price, must result from a difference in quality and value.

The foreign price is artificial, and far above the true value, produced by accumulated wealth, pride, and strong competition. Our home price is below the true value for the want of these stimulants.

My directions for a selection of rams, after you have found the flock of satisfactory pedigree, are these:

The fine Saxony ram, combining the proper quality for breeder, should possess a round, long, well-proportioned barrel, giving ample room in the chest, and insuring a constitution of quick, lively action, with a fine, soft, thick, long fleece, by all means uniform in quality, with a fine smooth skin; for without a fine smooth skin, which is the soil on which the crop is to grow, there will not be that uniformity in the fibre, which is so essential to the manufacture of fine cloths; a rough coarse skin will, like a badly prepared soil, yield an uneven crop, some fine and some coarse, varying in felting properties, and will be seen in fine fabrics. The roundness of the body is produced by a well arched rib.

Avoid flat-sided bucks, their offspring will be delicate, sickly, and short-lived; they want space for the lungs and digestive organs, and are liable to disease, for want of resisting capacity in the system.

Having the ewes and the bucks, they are to be kept separate and apart, until October, generally, *here* varying the yeaning time according to the latitude, but producing the lambs at the opening of spring, when succulent vegetables may be found by the ewes.

The period of gestation is one hundred and forty-eight days, and one buck may be allowed to fifty ewes.

The first season will yield a young flock of half bloods, and the second and third will begin to show the compounding influence of annual births, with improvements in form and value.

I have not space, nor is it designed in this article, to give any system of rules for the management and treatment of flocks, nor would any general statement of profit be of any service.

The system of treatment would vary and become widely different, as different latitudes are fixed upon for the operations. The management in latitude 32 deg., should vary much from that in 45 deg., in the United States; but, as a general remark, I would select dry undulating lands, give daily exercise in all suitable weather, never confine them long on the same grounds or pasture, and furnish moist food and not dry, if to be avoided. They should not be crowded in close houses and forced to breathe a vitiated air.

The merino is a hardy animal, and free from disease, if not produced by improper management. They have constitution and much vitality, and require exercise, and a variety of moist, nutritious food, and a dry *resting place*, not shelters, if the climate be warm, but hill sides, which send off by the rains, impurities and allow a free circulation of air.

Our botanic doctors select from the herbs of the forest their remedies for all the diseases of the human family; so sheep, guided by the

instincts of nature,when allowed to ramble in the fields and forests, will, by a judicious selection of astringents and laxatives, maintain good health. Details of disease are not attempted in this; if so, I could report the result of thirty-five years' practice. My remedies, chiefly, with my own flock, are preventives.

Cotton has its appropriate latitude, 32 1-2 deg., and admits of but little variation; but the latitude of wool is from Maine to the mouth of the Rio Grande, from the Atlantic to the Pacific. In any portion of this wide spread domain, wool culture may be made a fair profitable branch of agriculture.

If I should be governed by my own experience in this matter I should incline to select those sections of the country which would not be expensive in lands; open and mild in winter, to avoid the six months' feeding in Germany, and where the fleece can be kept growing all the year by green, succulent food; thereby preventing a check in growth, which injures the uniformity of the fibre, omitting the expense of long housing and feeding, during the rigors of the long winters.

Can competition be feared from the old world, filled to overflowing with human beings, with lands renting from six dollars to ten dollars per acre, and compelled to feed for half the year? Industry and energy, answer, no. And may these sentiments, aided by national pride, and a laudable desire and competition in the warm and cold climates for the golden fleece, bring up this neglected subject to its proper influence in American agriculture.

The labor of a nation is its wealth; and all good citizens are equally interested in its proper divisions and directions. The excesses in different branches should be directed into other channels by the talents of the nation.

Farmers who superintend the fields and flocks are not unusually inventive in plans, or skilled in political economy; may I not be excused, therefore, if I invoke the aid of the learned and talented statesmen of the United States (whether in or out of office) in the examination of the subject of wool culture.

Our natural resources appear to be boundless. The bearer of wool may treat with profits those lands fit and those unfit for the plough. My opinion is, that sheep may serve as a profitable renovater of tired cotton lands, from Charleston to Matamoras.

From my own experience in Mississippi and Tennessee, I can say that the finest wools for the best broad cloths may be grown in all the cotton regions of the United States; but as the greater consumption of wool is in the coarser fabrics, the habits of the southern people would point to it as most likely to succeed in the medium qualities. After shearing in the spring, I will furnish at your office samples of wool grown in 32 1-2 deg. and 36 deg., showing what has been accomplished in the attempts in the United States to grow fine wool, and furnishing strong proof in favor of the *warm climate.*

In Tennessee, we have no public exhibition of stocks by organized societies at present. I will, therefore, send you samples of wool, to test the correctness of the opinions which I have advanced. I should be highly gratified by an opportunity of exhibiting *thorough bloods* against any man in Europe or America—the points of comparison to

embrace size and shape of the animal, fineness, weight, and uniformity of fleece. This may seem to be boasting, but it is not so intended; for, as before stated, I have a Saxony flock, based upon an importation in 1823-'4, when the fame of her flocks was deservedly extended far and wide. I have given this importation my strict personal attention for twenty-five years, and have labored to cure defects and render them perfect. I only wish to ascertain if any one has done more—I care not from what country he may come, for I am confident he could have had no advantage in that particular.

The sheep has a domestic foe in the worthless cur, who often commits depredations upon the valuable flocks. Could this nuisance be lessened by a tax on the *extra number* kept at many places, leaving always the *watch* dog, to whose fidelity protection and attachment are ever due? if so, will legislatures generally extend this protection to the herds which I hope to see rapidly increasing throughout the country?

If there should be manifested any general disposition to adopt the wool culture in the Great West, I will endeavor to make public, for their benefit, in some agricultural journal, the results of my experience on two other points, which might be useful to many whose attention has never been directed to the subject, namely:

1st. General directions for the management of a flock in the South and West, embracing feeding, crossing, shearing and putting up wool for market, washed or unwashed, &c., &c.

2d. A system of remedies for the diseases which are most common among sheep; assigning the causes of the disease, when known, that they may be avoided by care and attention.

Many deaths will likely occur when there is a very limited knowledge of disease; but a little attention for a few years will remedy this objection.

I should, therefore, recommend beginners to commence with low priced ewes and a fine buck. The investment would be small, and the improved value of the offspring, from the merino crop, would prevent any loss, in the hands of the most uninformed, unless by gross negligence they should be suffered to perish.

In the lower districts of the United States, which are too warm for corn, and therefore unprofitable for the raising of pork, sheep may be grown as a partial substitute for pickled pork. The mutton, skin and wool, will compensate well for the investment and necessary attention.

I feel a deep and abiding interest in the prosperity and success of the cotton districts, and am confident that wool growing will aid to sustain them in times of difficulty and oppression, like the present, when the great staple, cotton, is forced below its intrinsic value, by causes abroad over which they have no control.

To avoid the influence of foreign wars, commercial disasters and bankruptcies in Europe, let the spindles and looms be brought to the corn fields of our rich valleys, near the cotton fields; draw off a portion of the labor from the tired lands of the cotton districts, and transfer it to the cotton mills; resuscitate the worn lands by peas, rye and oats, for the flocks.

A portion of all large cotton plantations may reduce the number of acres in cotton without affecting the yield, by adopting this rotation'

and taking wool and mutton as the produce of the resuscitating portion of lands.

If such a system of management shall be generally adopted in the south, the sun of prosperity would again shine brightly.

I am not advancing the opinion that the south is a stock country generally, but I am satisfied it is adapted to sheep; they do not require the rich grass pastures and grain which are so necessary for other stock.

The south seems to be designed by climate, and other natural permanent causes, as the great producer of the raw material for clothing.

Another law of nature demands a rotation of crops to insure success in agricultural pursuits; but the south is not and *cannot* be a farming country, adopting the rotation usual in higher latitudes—yet it may adopt *wool growing* as a rotation, and still pursue the productions indicated by natural laws.

Variety in the productions of all countries is better, as a system, than any one staple; but the substitutes must be suited to the climate and soil. Hence, I say grow both cotton and wool; they will both prosper in the south.

In cotton, we have inferior, fair Louisiana, and Sea Island, yielding different prices, from 5 to 30 cents per lb. In wool, we have common, mixed bloods, and superior Saxony, worth from 15 to 100 cents per lb.

The superior cotton, Sea Island, is confined to a few islands on the coast of Georgia; but the superior Saxony wool may be grown in any State in the Union.

We are told that thorough bred rams, in Silesia, are now worth from $500 to $2,000 each. If any combination of circumstances in Germany could produce such a result, it certainly furnishes much encouragement to growers of the same stock in the United States, where lands are cheap, and the cost but little for wintering. At one tenth of those prices in the United States, the business of growing merinos for sale would yield very large profits.

Your report is a valuable public document, and I hope to see your office sustained and encouraged by Congress, and your inquiries extensively answered.

Your labors promise much good to agriculture, commerce, and manufactures, and to the prosperity of the country at large.

I thank you for the distribution of the samples of wool brought over from Europe by Mr. Fleischmann. They furnish valuable information to the owners of thorough bred flocks in the United States; for, by comparison, they can see what progress they have made in growing fine wool.

You will by no means consider me as detracting from the labors of Mr. Fleischmann, I disclaim any such design. His report, as published by you, contains a great deal of valuable information on the subject of wool and sheep; but, believing some of his opinions were calculated to produce erroneous impressions among those who are not informed on the subjects, I have endeavored to furnish some facts which have caused me to differ from some of the views expressed in his report, with no other object than a desire to have the whole facts presented to those who may read it.

I have lately seen a statement of a "letting for one year only," of 65 rams in England of the mutton stock, which averaged $135, some bringing $300. This was for the services for one season, when they are all returned to their owner.

What peculiar value do these rams in England and Germany possess, which may not be given to them here? None. These facts show promising signs for the future, to those who may steadily prosecute the subject of sheep growing in the United States.

The importations of raw wool, and the importation of immense quantities of manufactured woolen goods annually into the United States, shows that an extensive home market may be found for wool, which I hope to see soon supplied from our own farms, plantations, and mountains. Prosperity to the spinners of wool and cotton at home and abroad; but especially to the former! Away with all antipathies between the spinners and growers of these great clothing staples of our country! They should be identified in sympathy and mutual support, and by concert, add to the profits and prosperity of both. Individual *man* is weak and impotent; but associated *man* is powerful. So with interests of a kindred kind; acting separate and apart, and with jealousy towards each other, all may languish and decline; but, by association and mutual support, they may flourish and produce wonderful results.

Our great interests should be leagued together, as the States of the Union, if we hope for general prosperity. They are dependent one upon another, and the destruction or depression of any great interest is felt, by its recoil, on others throughout the land.

Sheep husbandry in the south and west is in its infancy; but a wide field is open for its development. It is a permanent, substantial branch of agriculture; because wool and mutton are among the necessaries of life, and there must be an increasing demand with an increase of population.

The price of sheep in Germany and England shows this to be so. It is a stock which multiplies with rapidity.

A flock of an hundred ewes should in eight years produce at least a flock of a thousand. It may be commenced with a small capital, and with but little preparation; or it may well engage capital, talent, learning, industry, and energy.

I remain yours, very respectfully,

MARK R. COCKRILL.

To the Hon. Edmund Burke,
Com. of Patents, Washington City.

ART. VII.—COMPARTIVE COST OF WIRE AND PLANK FENCES.

To the Editors of the Western Journal:

The February number of the Western Journal, page 339, contains an article on Fencing; purporting to show the comparative cost of

Wire and Plank, and &c., the statement alluded to has been I perceive, copied from a very hasty and imperfect sketch that I furnished not long since, to a friend, but which I neither designed or authorised to be published. For some time past, I have intended to offer for the Journal, an article on this interesting subject, to be "founded upon facts," in all essential particulars; to serve as a sure guide to all concerned. But have not been able 'till recently, to complete my enquiries and experiments. The subjoined statements are now submitted to the readers of the "Western Journal" in the full belief that they are substantially, if not minutely correct—The matter of fencing is of no small importance to the agriculturist; especially those who are located on the prairies—any mode promising comparative cheapness, with sufficient strength, and superior durability; must commend itself, if set forth in detail, with demonstration—yet some there are no doubt who will be inclined to question the utility of substituting eight or nine strands of wire, not larger than a small goose quill; for ten sturdy rails of oak, "*staked and ridered*;" or for a good strong plank fence. The contrast is so great, in appearance, between the heavy wooden fencing that we have been so long accustomed to; and the light, airy, scarcely perceptible, wire substitute proposed; that the improvement will probably be only partially adopted for a time, with doubts and hesitancy. But there exists no good reason why iron-wire and posts shall not supersede all other modes of *Farm-fencing*; in the course of a few years. This will doubtless be the case, whenever fencing materials have to be purchased with money. That old deformity, the worm fence, may probably prevail for many years to come, in the interior woodlands, where rails can be had for little or no *cash* expense; but even there, it will be found cheapest and best to use wire to some extent, for enclosing gardens and other *inside* lots.

The comparison that I have drawn, is between plank and wire, showing with sufficient accuracy for a fair illustration, the cost of each, in the construction of strong and efficient fencing, properly fastened to well set posts at proper intervals. The prices of the materials &c., are rated as on the ground where they are to be used say on the average of twenty miles from St. Louis, or other convenient market

For the illustration take one hundred and fifty pannels of twelve feet each—the height to be four feet and six inches; the posts for the plank six feet apart; for the wires twelve feet; both to be strong and sufficient barriers against cattle, horses, sheep, hogs, *and pigs*; and both to be made of the very best materials to be obtained, of plank, posts and wire.

Note —One strand of No. 9 wire, 1800 feet long, will weigh 100 pounds, and will cost not over nine dollars. One string of 12 inch plank, for the bottom, same length, will contain 1800 feet at 1 1-2 cent will cost *twenty-seven* dollars. One string of 6 inch plank, for sides &c., same length, will contain 900 feet, at 1 1-2 cent will cost *thirteen and a half* dollars, the battens 4 cents each, posts 25 cents each, ground poles 4 cents each, nails about 5 cents a pound.

One hundred and fifty pannels or eighteen hundred feet plank fence.

301 cedar posts, - - - - -	at 25 cents	$75,25
150 ground poles or rails - - - - -	4 "	6,00
1 string 12 inch plank, bottom, - - -		27,00

4 strings 6 inch plank, side, - - -	at $13 50		54,00
1 string 6 inch plank, cap, - - -			13,50
301 battens, one to each post, - - -	at 4 cents		12,04
100 pounds nails, 60 to the pound, - -			5,00
Cost of the materials on the ground, - -			$192,79
Setting 301 posts, say 3 cts. each, - - -		$9.03	
Placing and securing ground poles, say - -		3.00	
Carpenter, for fitting and putting up 150 pannels, at, say 15 cts. per pannel, - -		22.50	
			$34.53
The whole probable cost, - - -			$227.32

or say *one dollar and fifty cents* per pannel.

One hundred and fifty Pannels, or eighteen hundred feet Wire Fence.

151 cedar posts at 25 cts. - - - - - -	$37.75
150 ground poles at 4 " - - - - - -	6.00
8 strands No. 9 iron wire, at $9 - - - -	72.00
151 staples, to secure top strand, at 1-2 cts. each -	75
Bracing for 6 or 8 of the posts, say - - - -	1.00
Cost of the materials on the ground, - - -	$117.50
Setting the posts and braces, say - - - -	4.50
Placing and securing the ground poles, - - - -	3.00
Boring the posts, seven holes in each, say - - -	2.00
Fitting and stretching the wires, say - - - -	7.00
Plugging the holes in the posts, say - - - -	1.00
The whole probable cost, - - - - - -	$135.00

or *ninety* cents per pannel.

The above cannot be far from correct. It may be safely assumed that the rough plank fence will cost at least fifty cents par pannel more than the wire.

The wires *must* be well coated with some substance to prevent rust. Three coats of white lead paint will be sufficient; which will cost but little, and is easily and quickly applied. The plank estimated in the foregoing statement, is supposed to be in the rough state as taken, from the land, and cannot be painted—it may be white washed however, which will cost at least as much as the painting of the wires.

To put the plank on a fair equality with the wire, it should be neatly planed and thoroughly painted—which would add at least *fifty* cents to the cost of each pannel. No. 9 wire is probably the best size for this use, No. 10 *may* answer, and will cost a trifle less by measure, and *only* a trifle—there is no doubt about No. 9—The wires must be passed *through* the posts, (except the top one) the holes bored with an inch auger, to admit a small paint brush. Stretch the wires *very tight*; this is effected with ease and expedition, by means of a simple contrivance (of my own) with which a common bench screw of wood, is employed with great power and convenience.

Good cedar posts, only twelve feet apart, planted firmly; the wires well stretched and well painted, with a good pole at the bottom to prevent pigs from rooting under; will present an impassable barrier to any animal that ought not to be outlawed—not at all liable to be injured by wind or rain storms—not easily impaired—occupying but little space—not obstructing the view—neat and pretty in appearance; and will be much more likely to endure fifty or sixty years, with a *little* care, than any wooden fence fifteen or twenty years, with *much* care, patching, propping, &c.

To put up the wire fence, requires no machine; a handy man and smart boy will complete *one hundred and fifty* pannels, perfectly, in but little over half the time that it would employ two carpenters to finish the same length of plank fence. Supposing the materials are to be hauled overland ten miles, or any distance; not less than *twenty-two thousand* pounds of wood will be required for the plank fence, including the posts—for the wire and posts, not over *four thousand pounds.*

The foregoing estimates are for *outside* fencing. Many *inside* enclosures, where only the larger animals, horses and cattle, are to be restrained, may be made secure with three or four strands of wire, on posts three and a half or four feet in height—in some instances, even two strands might be sufficient.

The annexed drawing will afford some idea how to arrange the wires.* GEO. C. SIBLEY.

LINDEN WOOD, near ST. CHARLES, }
March 9, 1850. }

ART. VIII.—COMMERCIAL LAW.

COMMON CARRIERS—BILL OF LADING—LATENT DAMAGE.

THE United States Circuit Court, in the City of New York have lately made a very important decision relating to common carriers and bills of lading. A quantity of cotton was shipped at N. Orleans for New York. The bills of lading described the cotton as "in good order and well conditioned." Heran, Lees & Co., New York, made advances upon the consignment with these bills. When the cotton was received in New York, it was found to be damaged—what is termed "country damage," which existed in the cotton when it was baled, and not easily detected until the bales are opened. Heran, Lees, & Co., refused to pay freight on account of this damage, and Bradstreet, the carrier, libelled the cotton for the balance of freight. The defence set up was, that the cotton was not delivered in good order,

*We regret that the necessity of going immmediately to press, does not allow time to procure a suitable cut, presenting the drawing referred to. EDITORS.

and the freight due was less than the damage to the cotton. The proof showed the bad condition of the cotton, and that it probably originated in "country damage." Other facts were stated, from which the jury might infer that the injury was perceptible, when the cotton was shipped, and that the captain had been "negligent and inattentive" in signing the bills of lading.

The Court held that consignees who had made advances, relying on the description in the bill of lading, had a right to deduct the damage to the cotton at the time of shipment, from the freight. Also, that an advance in the price of cotton sufficient to indemnify them against loss could not be taken into consideration, as the consignees were "entitled to the cargo, as described in the bill of lading, as their security for advances, without regard to the fluctuation in the market, or sales to be made at any particular state of prices."

COMMERCIAL STATISTICS.

PORK PACKING FOR 1849-50.

We have delayed the publication of the Pork Packing Statistics of the West, for the purpose of obtaining a full report from Mr. Cist, of the Cincinnati Advertiser, who we regard as the best authority upon this subject. There seems to have been some confusion in the Pork Packing Statistics of the last season, but we imagine that the following Tables may be regarded as sufficiently accurate for all practical purposes. Mr. Cist is entitled to much cerdit, for his labors in collecting the facts from so wide a range of country. We extract the following remarks which precede his Tables :

Although the season has closed earlier this year than usual, yet it has proved very difficult to complete and correct the early returns of the results. There have been two or three statements published, of which a considerable share are simply estimates, and as far as regards the Scioto and Miami regions, very inaccurate in figures. Several of the details vary from those which compose the present column, and time alone must determine whether any of them in the corresponding ones in mine are more correct.

Ohio	1849-50	1848-49
Cincinnati & Covington,	393,758	410,000
Hamilton,	13,100	
Lebanon,	6,877	8,000
Fanklin,	8,000	
Centreville,	11,600	10,000
Hebron,	21,000	
Bellbrook,	3,200	3,000
Chillicothe,	32,785	64,756
Columbus,	14,964	19,200
Groveport,	2,000	3,500
Winchester,	3,000	

West Jefferson,	4,500	
Circleville,	10,500	14,000
Lockburn,		2,000
Waverly,		2,500
Lancaster,		1,600
Preble county,		20,160
Waynesville & Corwin,		12,000
Wilmington,		4,000
Clarkesville,		2,000
Port Willliam,		13,000
Dayton,		8,600
Springfield,		2,000
	495,194	600,316

INDIANA.

Hagerstown,	500	
Cambridge & Dublin,	13,000	13,000
Milton,	4,000	3,000
Connersville,	18,000	14,000
Laurel,	8,000	12,000
Brookeville & Metamora,	5,000	8,400
Terre Haute,	59,544	47,000
Logansport,	5,000	6,000
Delphi,	10,944	10,000
Lafayette,	38,500	45,000
Attica,	8,100	9,000
Williamsport,	6,600	10,000
Covington,	3,500	5,500
Perrysville,	4,900	8,000
Eugene,	7,600	8,000
Newport,	3,800	5,000
Montezuma,	3,200	4,000
Armysburg,	3,300	2,000
Clinton,	13,000	16,000
Vincennes,	14,500	10,000
Gibson county,	16,000	30,000
Durkee's Ferry	4,500	3.000
Independence,	600	1,500
Americus,	1,300	700
Jeffersonville,	4,500	4,000
Frankford,	2,600	11,000
Lagro,	2,200	2,000
Huntington,	300	900
Fort Wayne,		4,000
Michigan City,	2,100	4,000
Laporte,	2,000	1,500
Madison,	87,709	95,500
Evansville,	20,000	
Indianapolis,	14,000	12,000
Lawrenceburg,	10,000	
	393,471	406,150

ILLINOIS.

Darwin,	3,500	4,000
York, & vicinity,	1,000	
Hendersonville,	3,000	650
Mt. Carmel & vicinity,	5,500	
Shawneetown,	12,000	
Ottawa,	1,700	2,000
Peru,	1,500	3,500
Princeton,	3,700	
Hennepin & Warsaw,	3,500	2,000
Lacon,	11,500	7,000
Chillicothe,	3,800	2,000
Peoria,	21,000	19,500
Galesburg,	1,200	2,000
Washington,	1,000	
Springbay,	500	
Pekin,	26,000	17,000
Westley,	300	
Tremont,	1,000	1,500
Canton,	19,000	10,000
Liverpool,	400	
Lewistown,	750	
Springfield,	19,540	2,350
Lindville,	1,500	
Winchester,	2,000	
Exeter,	2,000	
Beardstown,	31,000	45,750
Naples,	6,500	3,000
Meredosia,	9,000	2,600
Lancaster & Farmington,	6,800	
Ellisville,	1,200	
Abington,	800	
Florence & Pittsford,	3,000	2,500
Perry,	3,000	
Greggsville,	6,000	4,500
Savannah,	350	
Brushville, Macomb & Frederic,	9,000	
Lagrange,	2,000	1,500
Alton,	30,000	27,000
Chicago,	11,500	26,682
Cincinnati,	2,600	
Rockport,	4,000	7,000
Churchville,		2,000
Warsaw,	3,000	9,500
Quincy,	29,000	18,400
Point Isabel,		3,500
Knoxville,		11,000
Lawrenceville,		4,000
Farmington,		4,000
Bath,		800
	303,400	249,832

MISSOURI AND IOWA.

St. Louis,	124,589	89,400
Hannibal,	25,564	18,743
Chester,	1,000	
Sparta,	1,500	
Rockport,	4,000	
Missouri River,		46,300
Keokuk,	19,000	18,000
Burlington,	29,500	15,000
Bloomington,	3,500	9,000
Oquawka,	1,200	9,000
Monmouth,	1,200	
Ruthsburgh,	4,000	
Rock Island,	3,000	
New Boston,	1,000	
Hampton,	3,000	
Wapello,	5,000	
Fort Madison,		8,500
	277,053	213,943

KENTUCKY.

Louisville, New Albany and Jeffersonville,	184,600	179,000

RECAPITULATION.

	1849-50	1848-49
Ohio,	495,194	600,316
Indiana,	398,271	409,150
Illinois,	303,000	249,832
Missouri & Iowa,	227,053	213,943
Kentucky	184,601	179,000
	1,608,129	1,652,231

There are various points of minor importance not included in the above which may swell the above by an addition of 50,000

Cumberland River estimated,	100,000
Baltimore from West do.	100,000
	250,000

The corresponding number for 1848-49, under the last three heads was 325,000, exhibited a deficiency of 75,000

Fall off in table,	43,102
	118,102

Or a deficiency from last season of seven per cent.

THE IRON TRADE.

WE copy the following statistics of the Iron trade of Pennsylvania and Scotland, from the American Railroad Journal. There appears

to be a falling off, of nearly one half in the quantity of Bar and Sheet Iron sent forward from Pennsylvania in 1849, when compared with that of 1848. It would be interesting to know the true cause of this great decline in the Iron business of that State. If it be true that the Iron business cannot be sustained in Pennsylvania at present prices, then, we think, the production must be tranferred to some place farther West. It is the opinion of several experienced individuals with whom we have conversed, that Iron can be profitably produced in Missouri at present prices, and this would be a propitious time to make the experiment, while the business is declining in the East.

TABLE, showing the supplies of Iron sent forward from the interior of Pennsylvania, in 1848 and 1849.

1849—ROUTE.	Bar and sheet, pounds.	Pig and scrap, pounds.	Castings & blooms pounds.	Nails and spikes, pounds.
Chesapeake and Delaware canal, -	4,568,391	41,091,379	3,692,825	925,986
Delaware canal, Bristol, - -	61,696	58,552,532	464,384	742,034
Schuylkill Navigation, - - -	7,963,200	77,490,560	6,354,880	2,582,720
Columbia and Reading railroads, -	10,209,500	2,063,300	1,578,900	2,794,400
Norristown railroad, - - -	4,448,060	5,935,600	2,020,415	
Totals, - - - - -	27,250,847	185,133,371	14,112,405	7,046,147

1848—ROUTE.	Bar and sheet. pounds.	Pig and scrap. pounds.	Castings & blooms. pounds.	Nails & spikes. pounds.
Chesapeake & Delaware Canal, -	14,988,260	88,713,098	5,536,410	1,370,293
Delaware Canal, Bristol - -	1,117,515	50,733,874	109,227	*1,338,415
Schuylkill Navigation, - -	10,223,860	29,205,120	3,071,040	1,485,120
Columbia & Reading Railroads -	18,730,700	7,347,400	4,229,705	7,119,600
Norristown Railroad, - -	5,866,288	2,564,108	1,672,780	1,672,785
Totals, - - -	50,926,123	178,563,600	14,619,162	12,986,213

*Including 1,337,225 pounds of wire.

From the London Mining Journal.

THE SCOTCH IRON TRADE—ANNUAL RETURNS.

PRICES OF PIG IRON.

	Price in 1846.	1847.	1848.	1849.
January, -	£4 0s 0d.	3 13 4	2 8 4	2 7 0
February, -	3 17 6	3 13 4	2 10 0	2 11 7
March, -	3 10 0	3 11 1	2 4 4	2 9 9
April, - -	3 6 0	3 10 8	2 1 9	2 8 0
May, - -	3 10 0	3 5 3	2 2 3	3 3 9
June, - -	3 8 0	3 5 0	2 0 3	2 4 4
July, - -	3 10 0	3 8 1	2 5 6	2 5 0
August, - -	3 15 0	3 7 9	2 5 3	2 5 4
September, -	3 13 6	3 6 0	2 5 3	2 4 0
October, - -	3 0 6	2 19 10	2 3 0	2 2 10
November, -	3 9 0	2 11 0	2 2 9	2 4 3
December, -	3 12 6	2 7 6	2 2 4	2 7 2
Averages, -	3 16 3	3 11 8	3 5 0	2 6 1

PRICES OF COMMON BAR IRON.

	1847.			1848.					1849.
January,	£9	15s	0d.	8	7	15	5	15	6*a*— — —
February,	9	10	0	8	7	16	6	5	16*a*— — —
March,	9	10	0	7	5	0	7	6	15*a*— — —
April,	9	5	0	7	5	0	6	10	0*a* 5 10 0
May,	9	5	0	6	10	0	6	5	0*a* 5 10 0
June,	9	15	0	6	5	0	5	5	0*a*— — —
July,	9	10	0	6	5	0	5	10	0*a*— — —
August,	9	7	6	6	5	0	5	10	0*a*— — —
September,	9	10	0	6	5	0	5	10	0*a*— — —
October,	9	5	0	6	0	0	5	7	6*a*— — —
November,	9	0	0	5	5	0	5	10	0*a* 5 15 0
December,	8	0	4	5	0	0	5	12	6*a* 5 7 5

From Hunt's Magazine.

COMMERCE WITH CALIFORNIA.

The following table shows the number of vessels, as far as ascertained, that have left the different ports of the United States for California, from the commencement of the excitement to about December 25, 1849:

Ships.	Barks.	Brigs.	Schooners.	Steamers.	Total.
242	219	170	132	12	775

The total arrivals, up to the latest dates, of vessels is 279. The vessels sailed during the last month of 1849, of all classes, amounted to 181.

Whole number of clearances at different ports in the United States for California, since January 1, 1849 has been 698, as follows:

New York,	214	Newburyport,	6	Stonington,	2
Boston,	151	Gloucester,	6	Plymouth,	1
New Bedford,	42	Warren, R. I.	6	Barnstable,	1
Baltimore,	38	Sag Harbor,	6	Mystic, Con.	1
New Orleans,	32	Norfolk,	5	East Machias, Me.	1
Philadelphia,	31	New Haven,	5	Frankfort,	1
Salem,	23	Edgarton,	4	Cherryfield,	1
Bath, Maine,	19	Belfast, Maine,	3	Bridgeport, Con.	1
Portland, Maine,	13	Mobile,	3	New Castle, Me.	1
Bangor,	13	Newport, R. I.	2	Portsmouth N. H.	1
New London,	17	Bristol,	2	Searsport, Me.	1
Providence,	11	Holmes' Hole,	2	Hyannis,	1
Eastport, Maine,	10	Saco, Maine,	2	Norwich Con.	1
Nantucket,	8	Thomaston, Maine,	2		
Fall River,	7	Wilmington, N. C.	2	Total,	698
Charleston, S. C.	7				

Isaac S. Hone, Esq., Assistant Collector of the port of New York, furnishes the following statement of California clearances:—

Custom-House, New York, Collector's Office, *5th January*, 1850.

Number, description, and tonnage of vessels which cleared from the port of New York, during the year 1849, for San Francisco:—

Vessels.	Tonnage.	Vessels.	Tonnage.
7 Steamers,	3,571	20 Brigs,	4,858
77 Ships,	40,374	30 Schooners,	3,675
60 Barks,	24,413		
Total,			76,981

ARRIVALS OF VESSELS, AND EMIGRANTS AT SAN FRANCISCO IN 1849.

We find in the St. Louis Intelligencer, the following extract from the Alta California:

Capt. E. A. King, harbor master of San Francisco, gives the following official statement of the number of passengers who arrived at that port by sea from April 12th, 1849, to January 29th, 1850:

American, 29,847 males, 919 females, Foreign, 8620 males, 502 females. Total, 38,467 males, 1421 females. Total males and females, 39,888. These have arrived by sea in 805 vessels, to wit: —American, 487; Foreign, 318; total, 805. This number of ships is exclusive of army and navy vessels and steamers which have arrrived during the above period. The amount of tonnage arrived there since April 12th, and to the 29th of January is:—American, 228,429; Foreign, 55,899; total, 284,238.

From Hunt's Magazine.

EXPORTS OF BREAD STUFFS FROM THE UNITED STATES.

We give below a tabular statement of the quantity and value of wheat and rye flour, corn meal, wheat, rye, oats, ship-bread, &c., exported from the United States to foreign countries, during the year commencing on the first day of July, 1848, and ending on the 30th of June, 1849:—

		Quantity.	Value.			Quantity.	Value.
Wheat,	bush.	1,527,534	$1,756,848	Rye Meal,	bbls.	64,830	$218.24
Flour,	bbls.	2,108.013	11,280,582	Rye, Oats,			139,793
Ind. Corn,	busb.	13,257,309	7,966.369	Ship Bread	bbls.	111,372	364,318
Ind. Meal,	bbls.	405,169	1,169.625	Ship bread,	kegs,	21,378	

The total value of the above articles is $22,895,783.

COMMERCIAL REGULATIONS.

TARIFF OF MARINE INSURANCE PREMIUMS.

MINIMUM RATES.

Adopted by the board of Underwriters of the City of St. Louis, January 1, 1850.

The following rates of premium are to be charged as the minimum on all goods, wares and merchandise to be shipped on good sailing vessels,

or steam boats, to or from ports in Europe, Atlantic ports in the United States, ports on the Northern Lakes and ports on the inland rivers in the United States, to and from St. Louis.

To or from European and Atlantic Ports via New Orleans.

To ports in Europe, (excepting ports in the Bay of Biscay, the North and Baltic Seas,) by vessels sailing from New Orleans, on or after October tenth, and before July twentieth.	2 1-2 pr. ct.
By vessels sailing on or after July 10th, and before October tenth.	2 3-4 "
To the above excepted ports one fourth per cent. additional; on tobacco and grain to ports in Europe one fourth per cent. additional to be charged.	
From ports in Europe by vessels sailing on or after October first, and before July first,	2 1-2 "
By vessels sailing on or after July first, and before October first,	3 "
To or from Atlantic ports in the United States,	2 1-2 "

To or from Atlantic Ports, Inland Route.

To or from Atlantic ports, via the Ohio River to Wheeling or Pittsburgh by Steamboats, Canals and Railroads,	1 1-4 "
To or from Atlantic ports via the Illinois and Chicago canal, the Lakes, Canal and Railroads, and via Lake and Railroad to Cincinnati and Steamboats to St. Louis,	1 1-2 "

River Risks by good Steamboats.

Mississippi River—To points not below	Cairo,	1-2 "
" " " " " "	Memphis,	3-4 "
" " " " " "	New Orleans,	1 "
" " To points not above	Illinois River,	1-4 "
" " " " " "	Keokuk,	1-2 "
" " " " " "	Dubuque,	3-4 "
" " " " " "	Fort Snelling,	1 "
Missouri River—To points not above	St. Charles,	1-2 "
" " " " " "	Rocheport,	3-4 "
" " " " " "	Lexington,	1 "
" " " " " "	Westport landing,	1 1-4 "
" " " " " "	Savanna,	1 1-5 "
" " " " " "	Council Bluffs,	2 "
Illinois River—To points not above	Ottawa,	1-2 "
" " via Canal to Chicago,		3-4 "
" " " " and Lake to Detroit,		1 "
" " " " " "	Cleveland,	1 1-4 "
" " " " " "	Buffalo,	1 1-2 "
Ohio River—To points not above	Louisville, Ky.	5-8 "
" " " " "	Cincinnati,	3-4 "
" " " " "	Pittsburgh,	1 "
Cumberland River—To points not above	Nashville,	1 "
" " " " " "	Gainesboro'	1 1-4 "
Tennessee River—To points not above	Eastport,	1 "
" " " " " "	Tuscumbia,	1 1-4 "
" " " " " "	Knoxville,	1 1-2 "

Arkansas River—To points not above Post of Arkansas	1 1-2	"
" " " " " " Little Rock	2	
" " " " " " Lewisburg	2 1-2	"
" " " " " " Fort Smith,	3 3-4	"
" " " " " " Fort Gibson,	4 1-2	"
White River—To points not above Batesville,	2 1-2	"
Red River—To points not above Alexandria,	1 1-2	"
" " " " " " Nachitoches,	1 3-4	"
" " " " " " Shreveport,	2	"
" " " " " " Foot of the Raft,	2 1-4	"
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GENERAL RULES.

Pig Lead, Pig Copper and Pig Iron, shipped from St. Louis or any point on the Mississippi river between St. Louis and Cairo to Atlantic cities, via New Orleans, to be taken at two per cent. premium.

Pig Lead, Pig Copper and Pig Iron, shipped from points on the Ohio and Mississippi rivers, to points on any of the rivers, to be charged twenty-five per cent. less than rate of premiums that is charged on general merchandise to the same points of destination. Specie, Bullion and Gold Dust to be charged one-half the usual rates of premiums that is charged on merchandise in general.

No merchandise or other property to be ensured on any Keel, Canal or Flatboats or Barges, below the Port of St. Louis.

No merchandise or other property to be insured on any Keel or Canal Boat, or Barge towed by any steamboat above the Port of Saint Louis, unless the said Keel or Canal Boat or Barge shall have the certificate of one of the Steamboat Surveyors, stating that she is seaworthy and adapted to carry freight.

Hemp or flax shipped to, or from any port, after the 1st of April, 1850, if baled, pressed and covered with bagging in the same manner as cotton in bales, to be charged the same rates of premium that is charged on merchandise in general to or from similar ports. If baled and pressed, but not covered with bagging, to be charged twice the rate that is charged on merchandise in general.

If baled loose, and not pressed, and not covered with bagging, to be charged four times the rate that is charged on merchandise in general.

When insurance is effected on shipments made to or from points above St. Louis, on the Mississippi, Illinois and Missouri rivers to or from points below Saint Louis, without re-shipment, a deduction of one quarter per centum shall be made from the aggregate rates to and from Saint Louis. If re-shipped at Saint Louis, a deduction of one-eighth per centum.

An additional rate of one eighth of one per cent. to be charged on all goods, wares and merchandise shipped to or from St. Louis, to points above St. Louis, on Keel, Canal Boats or Barges, and on Steamboats towing the same.

For shipments to or from San Francisco, via New Orleans, the rate of premium charged to be four per centum.

MISCELLANEOUS ARTICLES.

MERCANTILE LIBRARY ASSOCIATION OF ST. LOUIS.

We are much gratified to learn, from the fourth annual report of the Board of Directors, that this valuable institution is steadily increasing in the number of its members; and also in its means of usefulness.

In connection with a notice of this institution, we desire to call the attention of our readers to the importance of public libraries and library associations. Society is composed of individuals differing in intellect, education, habits and taste; and hence those who would be instrumental in improving its condition, should aim to diversify, as much as practicable, the manner and means of instruction.

Although, we hold that, a desire for knowledge and a love of virtue, are inherent properties of man's nature, yet, each individual inclines to the investigation of some particular class of subjcets; and, if from any cause, this inclination should not be indulged, the desire, in time, abates, and he is left in imminent danger of being misled by his propensities and passions. An extensive and well selected library may afford subjects for the gratification of every taste, and conseqently, be the means of preventing many from falling into habits of vice. Satisfactory evidence is afforded by the Report of the Directors, that the citizens of St. Louis are beginning to appreciate the means of instruction and improvement afforded by this institution. The Directors say: "You will be ready to enquire if the members of the Association have appreciated the rich provision made for them? Have they read more than heretofore? Since the last annual meeting 4,743 volumes have been issued to 412 members, for which 3,663 entries were made in the register. As compared with 1848, this is an increase of readers of sixty per cent., and, as compared with 1847, an increase of more than three hundred per cent.

The number of books delivered, is fifty-eight per cent. more than in 1848, and nearly one hundred and twenty-five per cent. more than in 1847. The excess over 1846, the first year of the existence of the Association, is much larger. These statistics are truly encouraging. They show a regular and rapid increase of readers and of reading.

While this shall continue, the Library is safe, and will flourish, for a love of reading grows by what it feeds upon, and strengthens by indulgence, and the warmest, steadiest friends of the Library will ever be seen among those in whom this love has acquired the force of insatiable desire. But we are able to add another fact, which gives a higher value to the rest. It was [illegible]ed, that, of the books issued in 1849, for perusal, there was ar[illegible]d proportion of works of a useful and instructive sort. This [illegible] observ[illegible]n the right direction—affords pleasing evidence of the gro[illegible] enlarge[illegible]ulness of the Association, and, while uninterrupted, will w[illegible] is progr[illegible] confident prediction of the happiest effects on the mercantil[illegible] community, and on society in general."

We observe, with no ordinary degree of satisfaction, the evidence of a growing demand for "useful and instructive" books. This is a fact of more importance to this immediate community, and to the people of the West in general, than any which has come to our knowledge for many years—of more value than the acquisition of California with all its treasures.

Let a desire for useful knowledge, and the means of its attainment become general, and it shall not be long before this great Valley will present a spectacle of moral power, which will be the admiration of mankind. And who will have done more, in giving a wise direction to the public mind, than the philanthropic and enterprising founders of the "Mercantile Library Association of Saint Louis"

The following statistics are extracted from the report:

"Since the last annual meeting, we have expended, for books and periodicals, $1,888 40 as follows, viz:

"For 33 folios; 60 quartos; 462 octavos; 456 duodecimos; 49 smaller—in all 1,060 volumes.

There have been presented, in the same, 470 volumes, valued at $714 68, viz: "22 folios; 30 quartos; 140 octavos; 167 duodecimos; 111 smaller—in all 470.

"The additions to the Library, in the last twelve months, including books bought and presented were—55 folios; 90 quartos; 602 octavos; 623 duodecimos; 160 smaller—in all 1,530 volumes. Total value, $2,603 08. The number of volumes now belonging to the Association, is 4,299 as follows, viz:—65 folios; 247 quartos; 2,269 octavos; 1,264 duodecimos; 454 smaller---4,299."

There are now thirty life members, two hundred and eleven proprietors, three hundred and six clerks and one hundred and forty-two beneficiaries—making the whole number of members at this time, five hundred and eighty-nine. Of these, three hundred and eleven have been added since the last annual report.

We earnestly commend this institution to the patronage of our citizens; there are few whose means are not sufficient to afford them access to its rich treasures; and there are very few, we imagine, who would not, during the time devoted to reading, spend more money in some other way less profitable to themselves and less useful to society.

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